Redlined Version
Of
First Amended Complaint

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

PHUNWARE, INC.,

Plaintiff,

- against-

UBS SECURITIES LLC,

Defendant.

Civil Action: ~~-~~ 1:23-cv-06426-DEH

FIRST AMENDED COMPLAINT

JURY TRIAL DEMANDED

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Plaintiff Phunware, Inc. ("PHUN" or "Plaintiff"), by and through its undersigned attorneys, Cohen Milstein Sellers & Toll PLLC, and for its complaint against UBS Securities LLC ("UBS"), alleges upon personal knowledge, information and belief, and an investigation by counsel as follows:

I. SUMMARY OF CLAIMS

1. This case arises from Defendant UBS's scheme to manipulate PHUN's share price during the period of January 5, 2021 to March 15, 2023 (the "Relevant Period"). Throughout the Relevant Period, Defendant deliberately engaged in repeated spoofing that interfered with the natural forces of supply and demand, and repeatedly drove PHUN's share price downward. Defendant's manipulation violates Section 10(b), Rule 10b-5 and Section 9(a)(2) of the Securities Exchange Act of 1934, and constitutes fraud under New York state common law.

2. PHUN is a publicly-traded technology company that was founded in 2009, at a time when nearly every large enterprise business was starting its digital transformation – computing was transitioning to the cloud, application consumption was transitioning to mobile, and software was transitioning to a Software as a Service ("SaaS") model. PHUN was created to focus on one of the largest and most strategic opportunities in information technology: to provide enterprises a comprehensive software program that could engage, manage, and monetize customer experiences over mobile devices, directly improving business results and revenues for these companies on a worldwide basis.

3. PHUN is the pioneer of Multiscreen-as-a-Service ("MaaS"), a fully integrated enterprise cloud platform for mobile that provides companies the products, solutions, data and services necessary to engage, manage and monetize their mobile application portfolios and audiences globally at scale.

4. PHUN went public in December 2018. It is traded on the Nasdaq under the symbol PHUN. Since going public, PHUN has grown dramatically. At scale, PHUN has managed over 2 billion Phunware IDs, created to identify unique mobile devices visible on its network of applications, across more than 5,000 mobile application portfolios for more than 1 billion monthly active devices across more than 1 trillion database events. PHUN's products and services have been used by many of the world's leading brands in virtually every industry, including PwC, Intel, AT&T, Cisco, CBS, Mount Sinai, NYU Langone Health, VHC Health, Marriott, Atlantis Paradise Island Bahamas, Lowe's, Oprah, NFL, and NASCAR.

5. Analysts uniformly and consistently recommended PHUN to investors throughout the Relevant Period. All four of the firms following PHUN assigned it "Buy" ratings at all points during the Relevant Period, with price targets that were typically over $2 and reached as high as $6 – levels considerably higher than the actual prices at which PHUN traded.[1] This discrepancy continues to the present, with analysts' current price targets exceeding PHUN's current share price by over 300%.

6. That PHUN's stock price has not followed the market's expectation is not by chance. Rather, it is the result, in significant part, of Defendant's spoofing.

7. Spoofing is a form of market manipulation that, in this case, was accomplished by placing "Baiting Orders" in the Limit Order Book[2] that are not intended to be executed and have no legitimate economic purpose. The purpose of these Baiting Orders is to create a false illusion

[1] One of these analysts, Taglich Brothers, has rated PHUN as a "Speculative Buy" during the Relevant Period.

[2] A "Limit Order Book" is an electronic list of buy and sell orders for specific securities and other financial instruments that is organized by price levels and lists the number of shares being bid or offered at each price point. The Limit Order Book reflects whether the market price for the security is moving upwards or downwards and is visible to every trader on the exchange.

of market interest (either positive or negative) that will generate a response from other market participants that the spoofers can use to their advantage. For example, if the goal of the spoofing scheme is to drive the price down, the spoofer enters Baiting Orders to sell, to create an appearance of a downward trending market, which will then bait other market participants into entering their own sell orders to minimize or avoid suffering losses. Shortly thereafter, the spoofer will place orders to buy, or "Executing Purchases," which are intended to be executed against the other market participants' sell orders at the lower artificial prices prompted by the false Baiting Orders to sell. Immediately after placing these Executing Purchases to buy, the spoofer then cancels all of the Baiting Orders to sell, which completes the profitable spoofing cycle.

8. This scheme can be used multiple times during a trading day, and then repeated throughout a protracted trading period. To maximize the speed of their market access and execution of their trading strategies, spoofers typically utilize algorithmic trading programs through high-frequency trading computer systems which enable thousands of Baiting Orders to be placed in a matter of seconds and sometimes milliseconds.

9. During the Relevant Period, Defendant engaged in spoofing to manipulate the price of PHUN shares on Nasdaq, thus creating an imbalance in the market for PHUN shares and inducing other market participants to buy or sell at artificial prices. In order to carry out its spoofing scheme, Defendant placed over 82 million Baiting Orders and purchased over 640,000 PHUN shares in over 1,000 executed orders at manipulated prices during the Relevant Period.

10. PHUN sold over ~~34~~40 million shares at manipulated prices as a result of Defendant's actions. By repeatedly and brazenly manipulating the market through its spoofing, Defendant directly impacted the price of PHUN's shares in the market, causing PHUN significant losses as it sold millions of shares of its stock at artificially depressed prices.

II. JURISDICTION AND VENUE

11. This Court has jurisdiction over the subject matter of this action pursuant to Section 27 of the Exchange Act, 15 U.S.C. § 78aa and 28 U.S.C. § 1331. This Court also has jurisdiction over the state law claims under 28 U.S.C. § 1367 because those claims are so related to the federal claim that they form part of the same case or controversy.

12. This Court has personal jurisdiction over Defendant. Defendant maintained its principal place of business in this District, conducted a substantial part of the events asserted in this complaint in this District, and directed its fraudulent activity into this market by manipulating PHUN stock on Nasdaq, which is located in this District. The unlawful acts committed by Defendant had a direct and substantial impact on the market price of PHUN shares traded in this District in the United States.

13. Venue is proper in the Southern District of New York pursuant to 28 U.S.C. § 1391 and Section 27 of the Exchange Act, in that many of the acts, transactions and occurrences alleged herein occurred in this District, and Defendant conducted business here in connection with the events described herein. Defendant directly or indirectly made use of the means or instrumentalities of interstate commerce including the mails in connection with the conduct alleged herein.

III. THE PARTIES

A. Plaintiff

14. Plaintiff PHUN is a publicly traded company with a market capitalization of approximately $~~38~~52 million as of the filing of this Complaint, whose shares trade in New York on Nasdaq. During the Relevant Period, PHUN sold over ~~34~~40 million shares of its stock at depressed prices as a result of Defendant's illegal manipulation.

B. Defendant[3]

15. UBS Securities LLC is a Delaware limited liability company with its principal place of business at 1285 Avenue of the Americas, New York, New York 10019. UBS is a registered broker-dealer that executes securities transactions on various trading venues in the U.S.

16. Among other regulatory actions, in 2018, UBS AG (the parent company of UBS Securities LLC) agreed to pay $15 million to resolve claims by the Commodity Futures Trading Commission ("CFTC") which found that UBS AG for at least 5 years attempted to manipulate the price of precious metals futures contracts by using various methods of spoofing techniques.[4] Notably, this settlement also required UBS AG to maintain and implement training programs, systems, and control to detect and deter spoofing by its personnel.

17. Similarly, in 2012, UBS AG was ordered by the CFTC to pay a $700 million penalty to settle charges that it manipulated certain global benchmark interest rates. Specifically, the CFTC found that UBS "brazenly game[d] some of the world's most important financial benchmarks" by, for at least six years, regularly trying to manipulate multiple benchmark interest rates for profit, succeeding in manipulating the official fixing of Yen LIBOR, colluding with other LIBOR panel banks to spread false information, and making false U.S. Dollar LIBOR and other submissions to protect its reputation during the global financial crisis. The CFTC concluded that UBS's "unlawful conduct . . . undermined the integrity of the London Interbank Offered Rate

[3] Whenever reference is made to any act, device, contrivance, or scheme to manipulate PHUN securities by Defendant, the allegation is intended to also include the subsidiaries, affiliates, sister companies, agents and representatives of Defendant, whose identities and specific involvement in this market manipulation case are unknown to Plaintiff at this time. Only after discovery is taken will their identities and involvement become known.

[4] "CFTC Orders UBS to Pay $15 Million Penalty for Attempted Manipulation and Spoofing In the Precious Metals Futures Markets," CFTC Website (Jan. 29, 2018), available at https://www.cftc.gov/PressRoom/PressReleases/7683-18 (last visited July 25, 2023).

("LIBOR"), the Euro Interbank Offered Rate ("Euribor"), the Euroyen Tokyo Interbank Offered Rate ("Euroyen TIBOR"), and other interest rate benchmarks."[5] For the same misconduct, UBS AG was ordered to pay the U.K. Financial Services Authority $259 million, the Swiss Financial Markets Authority $64 million, and over $400 million to resolve criminal claims.[6]

18. UBS conducted continuous activity in New York, directly related to the claims in this action, by employing high speed algorithmic computer systems to route orders and execute trades of PHUN shares throughout the U.S., including in New York, on Nasdaq.

19. The spoofing activity that forms the basis of the claims in this action may have been executed by Defendant for its own account, for which it acted as a dealer, or for client accounts, for which it acted as a broker. In either scenario, Defendant's spoofing activity is in violation of the federal securities laws.

IV. PHUN'S BUSINESS

20. PHUN helps the world's most respected brands create category-defining mobile experiences. PHUN helps brands define, create, launch, promote, monetize and scale their mobile identities as a means to anchor the consumer journey and improve brand interactions.

21. PHUN pioneered Multiscreen-as-a-Service, a fully integrated enterprise cloud platform for mobile that provides companies the products, solutions, data and services necessary to engage, manage and monetize their mobile application portfolios and audiences globally at scale.

22. This MaaS platform provides the entire mobile lifecycle of applications through

[5] CFTC Website (December 19, 2012), available at https://www.cftc.gov/PressRoom/PressReleases/6472-12 (last visited July 25, 2023).

[6] Office of Public Affairs, USDOJ Website (Dec. 19, 2012), available at, https://www.justice.gov/opa/pr/ubs-securities-japan-co-ltd-plead-guilty-felony-wire-fraud-long-running-manipulation-libor (last visited July 25, 2023).

one procurement relationship. PHUN's MaaS platform allows for the licensing and creation of category-defining mobile experiences for customers and their application users worldwide.

23. PHUN's products and services include cloud-based mobile software licenses, analytics that provide data related to application use and engagement, content management, marketing automation, advertising, location services, and a range of cloud-based vertical solutions for healthcare, retail, sports, travel, real estate, and other industries.

24. PHUN's early business success led to an ever-growing list of industry awards, including being named by USA Today as an Entrepreneur of the Year Finalist in 2014, being named by Forbes as one of America's Most Promising Companies in both 2014 and 2015, being named by Deloitte as one of its Technology "Fast 500" companies from 2014-2016, and being named by Corporate Vision Magazine as the Best Mobile-Driven Enterprise Cloud Platform.

25. The global business world took notice and PHUN counts among its customers many of the top brands in the world, including Kaiser Permanente, the Mayo Clinic, Warner Bros., NBC Sports, AMC, ESPN, Intel, and PwC.

26. At scale, PHUN's platform has reached about 1 in 10 mobile devices globally, processing over 6 billion transactions every day.

27. The illegal market manipulation of PHUN stock by Defendant has significantly impaired the ability of Plaintiff to raise funds from the public markets at valuations that reflect its true market value, and will continue to impact the ability of PHUN to raise such funds or obtain and retain customers in the future.

V. DEFENDANT'S MANIPULATIVE SPOOFING SCHEME

A. Spoofing Is A Form Of Market Manipulation

28. There are three well established economic assumptions that animate securities

markets: (i) all else being equal, increased supply decreases prices and increased demand increases prices; (ii) a security's share price accurately reflects the security's value at that point in time based on the public information available to the market; and (iii) the quotes and orders published in the market reflect legitimate trading interest.

29. Spoofing is an insidious form of market manipulation that undermines the integrity and stability of securities markets by taking advantage of these three economic assumptions to artificially and illegally move the market price of a security either upwards or downwards.

30. Specifically, a market participant, often utilizing high-frequency trading computer systems that operate algorithmic trading programs to maximize the speed of their market access and the execution of their trading strategies, creates a false illusion of excess supply or demand by placing Baiting Orders into a Limit Order Book that are not intended to be executed and have no legitimate economic purpose. These Baiting Orders are entered into the Limit Order Book to create an illusion of market interest intended to generate a response from other market participants to follow the artificial selling or buying trend that the Baiting Orders created.

31. A legitimate trader buys when it thinks the price of a security is likely to go higher and sells when it thinks the price of a security will go lower. One of the tell-tale signs of a manipulative spoofer is a rapid reversal of trading direction—a lot of sell orders, followed by buy orders, followed by the cancellation of sell orders—which suggests that the original sell orders were not intended to be executed, but were merely a ploy to drive the price down to "buy low." Defendant engaged in this distinctive manipulative spoofing pattern again and again during the Relevant Period.

32. Thus, if the spoofer's goal is to drive the price down, the spoofer enters Baiting Orders to sell, which are intended to "bait" or "trick" investors into entering their own sell orders

to minimize or avoid suffering losses in a downward trending market. Shortly after the spoofer places the Baiting Orders to sell, and after those Baiting Orders have lured unsuspecting traders into placing their own orders, the spoofer places orders to buy, or "Executing Purchases," on the opposite side of the Limit Order Book. These Executing Purchases to buy are intended to be executed at the artificially low prices generated by the Baiting Orders to sell. Immediately after executing the Executing Purchases to buy in the Limit Order Book, the spoofer cancels all of the Baiting Orders to sell, which completes the spoofing cycle.

33. In short, manipulative spoofing can be seen as high-speed bluffing, in which the spoofer deceives unsuspecting traders into transacting at artificially high or low prices. For example, a spoofer could place Baiting Orders to sell a big block of shares at $10, when the last sale was at $10.03. After other sellers rush to match the lower price, the spoofer would quickly pivot, cancel their sell order, and then place Executing Purchases at the $10 price they generated with the Baiting Order. This scheme can be used multiple times during a trading day, and then repeated throughout a protracted trading period, as it was here.

34. In the SEC's "Staff Report on Algorithmic Trading in U.S. Capital Markets," dated August 5, 2020, the SEC discussed spoofing, describing it as "the submission and cancellation of buy and sell orders without the intention to trade in order to manipulate other traders" and calling it a "harmful strategy" employed by some high-frequency traders. The SEC further stated that spoofing was carried out by "strategically plac[ing] spoofing orders to create the impression of substantial order book imbalances in order to manipulate subsequent prices," and noted that "stocks targeted for spoofing had higher return volatility, lower market capitalization, lower price level, and lower managerial transparency."

35. The persistence of the price impact of manipulation is well-established in the

market microstructure literature. As Nobel prize-winning economist Professor Paul Milgrom has explained: "Because manipulative trades are viewed by market participants as potentially informed, and potentially informed trades can result in permanent price impact, ***manipulative trades can lead to permanent price impact***."[7] Based on an extensive review of the literature, Dr. Milgrom gives two reasons for why market participants cannot readily identify manipulative trades: ***First***, it is highly improbable that manipulative trades can immediately be identified as manipulative and uninformed by market participants. For any agent in the market, the incentive to gather private information—and thus to become an informed trader—is directly related to the volume of its trades and the size of its positions. The Defendant here is among the largest market participants and has powerful incentives to be well-informed. Other participants would likely expect this, and therefore have good reason to treat their trades as potentially informed. This tendency of large traders to be well informed is also observed by others in the market microstructure literature. ***Second***, it is also improbable that the public will eventually come to know which trades were manipulative and uninformed. For all these reasons and others, Professor Milgrom concluded, "The market microstructure literature demonstrates clearly how potentially informed trades can result in permanent price impact."

B. Defendant Engaged In Manipulative Spoofing Of PHUN

36. Trading records detailed in Exhibit 1 hereto, demonstrate that Defendant placed tens of millions of Baiting Orders to sell PHUN shares during the Relevant Period.[8] The spoofing

[7] Expert Report of Professor Maul Milgrom, *Alaska Electrical Pension Fund v. Bank of America*, Case No. 14-cv-7126 (JMF) ECF No. 551 (S.D.N.Y.) (Jan. 22, 2018) (attached hereto as Ex. 3).

[8] The data utilized by Plaintiff to support the allegations in this Complaint consist of the complete stream of deanonymized order book messages on the Nasdaq market, including cancellations and executions, provided directly by Nasdaq. As only a fraction of order flow in PHUN's shares is deanonymized, Plaintiff believes that additional spoofing activity is likely to be revealed through discovery.

scheme perpetrated by the Defendant was intended to, and did, drive PHUN's market price downward so that Defendant could purchase PHUN shares at artificially lower prices. This scheme was accomplished through the following three stages:

37. First, Defendant flooded the markets with large quantities of Baiting Orders to sell during the "Baiting Period." These orders had no legitimate purpose and when placed, were not intended to be executed. The sole purpose for the placement of these Baiting Orders to sell was to deceive and mislead market participants into believing that the market price of PHUN's stock was moving downward.

38. Second, shortly after the Baiting Orders to sell were placed in the Limit Order Book, Defendant placed its Executing Purchases on the opposite side of the Limit Order Book to purchase PHUN shares at the lower stock prices created by the downward manipulation of its Baiting Orders.

39. Finally, immediately after the completion of its Executing Purchases to buy PHUN shares at the lower prices, Defendant cancelled and removed all of its Baiting Orders to sell from the Limit Order Book.[9]

40. This spoofing pattern was repeated by Defendant multiple times a day and continuously throughout the Relevant Period. Defendant engaged in this distinctive spoofing pattern, each individually a "Spoofing Episode," again and again, many multiple times a day and continuously throughout the Relevant Period—and at multiples of the average trader—resulting in large profits. Specifically, during the Relevant Period, Defendant submitted at least 82,717,302 shares of fictitious Baiting Orders on Nasdaq.

[9] The terms "cancel" or "cancellation" in this Complaint refer to the deletion of an order from a Limit Order Book, as well as a modification of an order or quote on a Limit Order Book which results in reduction in the volume of shares displayed in that order or quote.

41. As it intended, Defendant's Baiting Orders led to a substantial sell-side imbalance in the Defendant's order flow at the time of Executing Purchases, successfully creating artificial selling pressure in the market and inducing other unknowing market participants to submit additional sell orders and artificially drive down the price of PHUN shares.

42. As reflected in Exhibit 1, Defendant then took advantage of the artificially depressed price of PHUN shares it created by placing Executing Purchases to purchase a total of 647,119 shares below the prevailing best offer prior to entry of the Baiting Orders, pocketing the difference. Almost immediately thereafter, Defendant then cancelled all of its fictitious Baiting Orders.

43. Specifically, Defendant submitted 82,717,302 shares of Baiting Orders to sell, and purchased 647,119 shares in 1,021 distinct Executing Purchases at prices depressed by these Baiting Orders, leading to an average price decline of -7.60% per purchase.

44. Notably, while engaging in spoofing activity, Defendant submitted significantly more sell-side share orders per each Executing Purchase than for non-spoofed executed purchases. During the Baiting Periods, Defendant submitted new sell-side orders for a median of 19,584 shares per Executing Purchase. During the same time window prior to non-spoofed executed purchases, market participants submitted a median of 4,500 shares in new sell-side orders per purchase. In other words, Defendant' ratio of sell-side orders per executing purchase was more than ***4 times*** that of non-spoofed executed purchases.

45. Similarly, Defendant cancelled significantly more sell-side orders than after non-spoofed executed purchases. During the Cancellation Period following the Executing Purchases, Defendant cancelled a median of 19,584, or 100%, of the created volume of 19,584 sell-side shares. By contrast, during the same time window as the Cancellation Period following non-spoofed

executed purchases, market participants cancelled a median of 500, or 11.11%, of the 4,500 sell-side shares created before the purchase. In other words, Defendant's sell-side cancellation volume following spoofed purchases was ***39 times*** that of non-spoofed executed purchases.

46. In other words, when spoofing the market, Defendant injected more artificial sell-side order flow than non-spoofed orders prior to buying shares, as measured by (1) the volume of sell side order flow (more than 4 times higher); (2) the cancellation of that order flow (39 times higher); and (3) the greater share of cancelled sell-side order flow (100% vs. 11.11%).

47. The placement and cancellation of Baiting Orders to sell by Defendant throughout the Relevant Period operated as a manipulative fraud on the market. The Baiting Orders were intended to mislead other market participants into believing that the downward movement of PHUN's share price was being caused by the natural forces of supply and demand. The placement and cancellation of thousands of Baiting Orders by Defendant was not in furtherance of any legitimate purpose. Rather, these activities were intended to send false and misleading pricing signals to the market to trick or bait market participants into executing their own sell orders. This created a "pile-on" effect which drove down PHUN's share price even further, thereby enabling Defendant to purchase PHUN's shares at artificially manipulated lower prices.

48. The following are examples of specific spoofing activities by Defendant during the Relevant Period. These examples are based on detailed deanonymized trading records from Nasdaq that reflect the interplay between the Baiting Orders and Executing Purchases and how Defendant manipulated downward the market price of PHUN shares on Nasdaq. Defendant's relentless and repetitive spoofing activities throughout the Relevant Period caused sustained declines in the market price of PHUN shares from which it did not recover during the Relevant Period. Exhibit 1 to this Complaint contains a comprehensive list of de-anonymized Spoofing

Episodes and spoofing activity by Defendant, along with the volume and prices of Baiting Orders, Executing Purchases and the price impact of such spoofing activity, during the Relevant Period.

1. Example Episode: April 27, 2021 at 09:30:35.551829

49. On April 27, 2021 at 09:30:35.551770181, the national best bid and offer for PHUN stock was a bid to purchase 6 shares at a price of $1.63 per share and an offer to sell 59 shares at a price of $1.64 per share.

50. From 09:30:00.528225910 to 09:30:35.551829, Defendant placed 404,486 shares of Baiting Orders at prices ranging from $498.00 to $1.70 per share.[10] As of 09:30:35.551829, the submission of these Baiting Orders left Defendant with an imbalanced order book position favoring the sell side among attributed Nasdaq orders. As calculated by Plaintiff, this order book position consisted of bids to purchase 47,285 shares at prices ranging from $0.45 per share to $1.63 per share, and an offer to sell 404,386 shares at prices ranging from $1.70 per share to $4.28 per share.

51. Between 09:30:35.551829 and 09:32:35.551829, Defendant did not sell any shares of PHUN in attributed Nasdaq orders, consistent with the fictitious nature of the Baiting Orders.

52. The Baiting Orders successfully induced the entry of sell orders from other market participants, driving the price of PHUN shares downward. At 09:30:35.551829, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of

[10] The volume of Baiting Orders is the lesser of the volume of attributed sell-side orders cancelled by the Defendant in the two minutes after the Executing Purchase and the volume of attributed sell-side orders created by the Defendant in the two minutes prior to the Executing Purchase (*i.e.*, the attributed sell-side orders cancelled by the Defendant within two minutes after the Executing Purchase whose aggregate volume was created by the Defendant within the two minutes prior to the Executing Purchase). The market impact of a Baiting Order is the same regardless of whether Defendant cancelled that specific Baiting Order or an equivalent order placed by Defendant on Nasdaq. For this reason, whenever prices for Baiting Orders are stated in this Complaint, those prices reflect the prices of orders cancelled after an Executing Purchase.

100 shares, at a price of $1.63 per share, which was below the prevailing best offer of $1.64 per share.

53. Defendant immediately began to cancel the artificial supply injected by these Baiting Orders within 365 microseconds of its Executing Purchases. By 09:32:35.551829, Defendant had cancelled the artificial supply injected by all of its Baiting Orders, eliminating the artificial sell-side imbalance that it falsely conveyed and injected into the market through its Baiting Orders.

54. Notably, in order to hide its spoofing activity, Defendant parked these Baiting Orders behind orders placed by other unsuspecting traders. For example, at 09:29:46.228947355, before Defendant had placed a single Baiting Order, Latour Trading LLC placed an order to sell 100 shares at $1.71 per share, a better price than many of the Baiting Orders placed by Defendant. Latour Trading LLC did not cancel that order until 09:44:12.278734518, nearly 15 minutes later, consistent with market making activity and demonstrating the *bona fide* nature of its sell order. By contrast, Defendant rapidly cancelled all of its Baiting Orders after purchasing PHUN shares at an artificially depressed price.

55. Defendant sold PHUN shares both before and after this Executing Purchase, which enabled it to convert profits from its spoofing activity to cash regardless of whether the Executing Purchases established a long position in PHUN shares or were used to close out a previously established short position in PHUN shares. Specifically, Defendant sold 5,000 shares at a price of $1.65 per share at 15:59:56 on April 28, 2021, after the Executing Purchase, which would have generated a return of 1.226994% on its Executing Purchases at the artificially depressed price of $1.63 per share. Defendant also sold 40 shares at a price of $1.90 per share at 09:34:43 on April 09, 2021, prior to the Executing Purchase, which would have generated a return of 16.56442% if

that sale created a short position that was closed out by the Executing Purchases at the artificially depressed price of $1.63 per share.

2. Example Episode: October 26, 2021 at 09:30:04.427209

56. On October 26, 2021 at 09:30:04.427116000, the national best bid and offer for PHUN stock was a bid to purchase 13 shares at a price of $6.25 per share and an offer to sell 176 shares at a price of $6.26 per share.

57. From 09:28:04.427209 to 09:30:04.427209, Defendant placed 13,288 shares of Baiting Orders at prices ranging from $300.00 to $6.75 per share. As of 09:30:04.427209, the submission of these Baiting Orders left Defendant with an imbalanced order book position favoring the sell side among attributed Nasdaq orders. As calculated by Plaintiff, this order book position consisted of bids to purchase 4,333 shares at prices ranging from $4.57 per share to $6.25 per share, and an offer to sell 13,188 shares at prices ranging from $6.40 per share to $22.00 per share.

58. Between 09:30:04.427209 and 09:32:04.427209, Defendant sold only 1,241 shares of PHUN in attributed orders, consistent with the fictitious nature of the Baiting Orders.

59. The Baiting Orders successfully induced the entry of sell orders from other market participants, driving the price of PHUN shares downward. At 09:30:04.427209, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 50 shares, at a price of $6.25 per share, which was below the prevailing best offer of $6.26 per share.

60. Defendant immediately began to cancel the artificial supply injected by these Baiting Orders within 3.592215 seconds. By 09:32:04.427209, Defendant had cancelled the artificial supply injected by all of its Baiting Orders, eliminating the artificial sell-side imbalance

it falsely conveyed and injected into the market through its Baiting Orders.

61. Defendant sold PHUN shares both before and after this Executing Purchase, which enabled it to convert profits from its spoofing activity to cash regardless of whether the Executing Purchases established a long position in PHUN shares or were used to close out a previously established short position in PHUN shares. Specifically, Defendant sold 20 shares at a price of $6.40 per share at 09:30:21 on October 26, 2021, after the Executing Purchase, which would have generated a return of 2.40% on its Executing Purchases at the artificially depressed price of $6.25 per share. Defendant also sold 500 shares at a price of $7.15 per share at 16:00:00 on October 25, 2021, prior to the Executing Purchase, which would have generated a return of 14.40% if that sale created a short position that was closed out by the Executing Purchases at the artificially depressed price of $6.25 per share.

3. Example Episode: October 27, 2021 at 09:30:36.323727

62. On October 27, 2021 at 09:30:36.297767561, the national best bid and offer for PHUN stock was a bid to purchase 79 shares at a price of $4.85 per share and an offer to sell 52 shares at a price of $4.87 per share.

63. From 09:28:36.323727 to 09:30:36.323727, Defendant placed 19,820 shares of Baiting Orders at prices ranging from $25.00 to $5.09 per share. As of 09:30:36.323727, the submission of these Baiting Orders left Defendant with an imbalanced order book position favoring the sell side among attributed Nasdaq orders. As calculated by Plaintiff, this order book position consisted of bids to purchase 60,198 shares at prices ranging from $3.63 per share to $4.85 per share, and an offer to sell 173,158 shares at prices ranging from $4.99 per share to $100.00 per share.

64. Between 09:30:36.323727 and 09:32:36.323727, Defendant sold only 4,387 shares

of PHUN in attributed orders, consistent with the fictitious nature of the Baiting Orders.

65. The Baiting Orders successfully induced the entry of sell orders from other market participants, driving the price of PHUN shares downward. At 09:30:36.323727, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 824 shares, at a price of $4.85 per share, which was below the prevailing best offer of $4.87 per share.

66. Defendant immediately began to cancel the artificial supply injected by these Baiting Orders within 24.61932 seconds. By 09:32:36.323727, Defendant had cancelled the artificial supply injected by all of its Baiting Orders, eliminating the artificial sell-side imbalance it falsely conveyed and injected into the market through its Baiting Orders.

67. Notably, in order to hide its spoofing activity, Defendant parked these Baiting Orders behind orders placed by other unsuspecting traders. For example, at 09:30:28.897143626, before Defendant had placed a single Baiting Order, Wall Street Access placed an order to sell 100 shares at $6.01 per share, a better price than many of the Baiting Orders placed by Defendant. Wall Street Access did not cancel that order until 09:54:23.430989834, nearly 25 minutes later, consistent with market making activity and demonstrating the *bona fide* nature of the sell order. By contrast, Defendant rapidly cancelled all of its Baiting Orders after purchasing PHUN shares at an artificially depressed price.

68. Defendant sold PHUN shares both before and after this Executing Purchase, which enabled it to convert profits from its spoofing activity to cash regardless of whether the Executing Purchases established a long position in PHUN shares or were used to close out a previously established short position in PHUN shares. Specifically, Defendant sold 100 shares at a price of $4.99 per share at 09:31:07 on October 27, 2021, after the Executing Purchase, which would have

generated a return of 2.886598% on its Executing Purchases at the artificially depressed price of $4.85 per share. Defendant also sold 500 shares at a price of $4.89 per share at 11:28:44 on October 26, 2021, prior to the Executing Purchase, which would have generated a return of 0.8247423% if that sale created a short position that was closed out by the Executing Purchases at the artificially depressed price of $4.85 per share.

4. Example Episode: October 28, 2021 at 09:31:29.737682

69. On October 28, 2021 at 09:31:29.737640733, the national best bid and offer for PHUN stock was a bid to purchase 6 shares at a price of $4.70 per share and an offer to sell 95 shares at a price of $4.72 per share.

70. From 09:29:29.737682 to 09:31:29.737682, Defendant placed 1,320,303 shares of Baiting Orders at prices ranging from $300.00 to $4.95 per share. As of 09:31:29.737682, the submission of these Baiting Orders left Defendant with an imbalanced order book position favoring the sell side among attributed Nasdaq orders. As calculated by Plaintiff, this order book position consisted of bids to purchase 537,427 shares at prices ranging from $0.02 per share to $4.70 per share, and an offer to sell 1,320,303 shares at prices ranging from $4.95 per share to $300.00 per share.

71. Between 09:31:29.737682 and 09:33:29.737682, Defendant did not sell any shares of PHUN in attributed Nasdaq orders, consistent with the fictitious nature of the Baiting Orders.

72. The Baiting Orders successfully induced the entry of sell orders from other market participants, driving the price of PHUN shares downward. At 09:31:29.737682, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 100 shares, at a price of $4.70 per share, which was below the prevailing best offer of $4.72 per share.

73. Defendant immediately began to cancel the artificial supply injected by these Baiting Orders within 399 microseconds of its Executing Purchases. By 09:33:29.737682, Defendant had cancelled the artificial supply injected by all of its Baiting Orders, eliminating the artificial sell-side imbalance that it falsely conveyed and injected into the market through its Baiting Orders.

74. Defendant sold PHUN shares both before and after this Executing Purchase, which enabled it to convert profits from its spoofing activity to cash regardless of whether the Executing Purchases established a long position in PHUN shares or were used to close out a previously established short position in PHUN shares. Specifically, Defendant sold 882 shares at a price of $4.72 per share at 15:50:35 on October 28, 2021, after the Executing Purchase, which would have generated a return of 0.4255319% on its Executing Purchases at the artificially depressed price of $4.70 per share. Defendant also sold 14 shares at a price of $4.92 per share at 09:30:04 on October 28, 2021, prior to the Executing Purchase, which would have generated a return of 4.680851% if that sale created a short position that was closed out by the Executing Purchases at the artificially depressed price of $4.70 per share.

5. Example Episode: November 08, 2021 at 09:31:10.819250

75. On November 08, 2021 at 09:31:10.819248177, the national best bid and offer for PHUN stock was a bid to purchase 39 shares at a price of $4.10 per share and an offer to sell 8 shares at a price of $4.11 per share.

76. From 09:29:10.819250 to 09:31:10.819250, Defendant placed 1,312,327 shares of Baiting Orders at prices ranging from $500.00 to $4.16 per share. As of 09:31:10.819250, the submission of these Baiting Orders left Defendant with an imbalanced order book position favoring the sell side among attributed Nasdaq orders. As calculated by Plaintiff, this order book

position consisted of bids to purchase 294,125 shares at prices ranging from $0.02 per share to $4.10 per share, and an offer to sell 1,312,327 shares at prices ranging from $4.16 per share to $500.00 per share.

77. Between 09:31:10.819250 and 09:33:10.819250, Defendant did not sell any shares of PHUN in attributed Nasdaq orders, consistent with the fictitious nature of the Baiting Orders.

78. The Baiting Orders successfully induced the entry of sell orders from other market participants, driving the price of PHUN shares downward. At 09:31:10.819250, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 440 shares, at a price of $4.10 per share, which was below the prevailing best offer of $4.11 per share.

79. Defendant immediately began to cancel the artificial supply injected by these Baiting Orders within 167 microseconds of its Executing Purchases. By 09:33:10.819250, Defendant had cancelled the artificial supply injected by all of its Baiting Orders, eliminating the artificial sell-side imbalance that it falsely conveyed and injected into the market through its Baiting Orders.

80. Notably, in order to hide its spoofing activity, Defendant parked these Baiting Orders behind orders placed by other unsuspecting traders. For example, at 09:14:50.918999368, before Defendant had placed a single Baiting Order, Two Sigma Securities, LLC placed an order to sell 100 shares at $5.28 per share, a better price than many of the Baiting Orders placed by Defendant. Two Sigma Securities, LLC did not cancel that order until the end of the trading day at 16:00:02.602535639, consistent with the *bona fide* nature of the sell order. By contrast, Defendant rapidly cancelled all of its Baiting Orders after purchasing PHUN shares at an artificially depressed price.

81. Defendant sold PHUN shares both before and after this Executing Purchase, which enabled it to convert profits from its spoofing activity to cash regardless of whether the Executing Purchases established a long position in PHUN shares or were used to close out a previously established short position in PHUN shares. Specifically, Defendant sold 5 shares at a price of $4.30 per share at 15:54:50 on November 08, 2021, after the Executing Purchase, which would have generated a return of 4.878049% on its Executing Purchases at the artificially depressed price of $4.10 per share. Defendant also sold 47 shares at a price of $4.22 per share at 16:00:00 on November 05, 2021, prior to the Executing Purchase, which would have generated a return of 2.926829% if that sale created a short position that was closed out by the Executing Purchases at the artificially depressed price of $4.10 per share.

6. Example Episode: March 15, 2023 at 09:30:20.706990

82. On March 15, 2023 at 09:30:10.742295128, the national best bid and offer for PHUN stock was a bid to purchase 6 shares at a price of $0.77 per share and an offer to sell 33 shares at a price of $0.771 per share.

83. From 09:28:20.706990 to 09:30:20.706990, Defendant placed 82,549 shares of Baiting Orders at prices ranging from $288.00 to $0.771 per share. As of 09:30:20.706990, the submission of these Baiting Orders left Defendant with an imbalanced order book position among attributed Nasdaq orders. As calculated by Plaintiff, this order book position consisted of bids to purchase 876 shares at prices ranging from $0.532 per share to $0.77 per share, and an offer to sell 82,549 shares at prices ranging from $0.771 per share to $2.50 per share.

84. Between 09:30:20.706990 and 09:32:20.706990, Defendant did not sell any shares of PHUN in attributed orders, consistent with the fictitious nature of the Baiting Orders.

85. The Baiting Orders successfully induced the entry of sell orders from other market

participants, driving the price of PHUN shares downward. At 09:30:20.706990, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 167 shares, at a price of $0.77 per share, which was below the prevailing best offer of $0.771 per share.

86. Defendant immediately began to cancel the artificial supply injected by these Baiting Orders within 59.54329 seconds. By 09:32:20.706990, Defendant had cancelled the artificial supply injected by all of its Baiting Orders, eliminating the artificial sell-side imbalance it falsely conveyed and injected into the market through its Baiting Orders.

87. Notably, in order to hide its spoofing activity, Defendant parked these Baiting Orders behind orders placed by other unsuspecting traders. For example, at 09:30:01.385845217, before Defendant had placed a single Baiting Order, Flow Traders U.S. LLC placed an order to sell 100 shares at $0.7942 per share, a better price than many of the Baiting Orders placed by Defendant. Flow Traders U.S. LLC did not cancel that order until over 15 minutes later at 09:47:37.301284608, consistent with the *bona fide* nature of the sell order. By contrast, Defendant rapidly cancelled all of its Baiting Orders after purchasing PHUN shares at an artificially depressed price.

88. Defendant sold PHUN shares both before and after this Executing Purchase, which enabled it to convert profits from its spoofing activity to cash regardless of whether the Executing Purchases established a long position in PHUN shares or were used to close out a previously established short position in PHUN shares. Specifically, Defendant sold 100 shares at a price of $0.7799 per share at 15:55:00 on March 17, 2023, after the Executing Purchase, which would have generated a return of 1.285714% on its Executing Purchases at the artificially depressed price of $0.77 per share. Defendant also sold 60 shares at a price of $0.93 per share at 15:59:37 on March

06, 2023, prior to the Executing Purchase, which would have generated a return of 20.77922% if that sale created a short position that was closed out by the Executing Purchases at the artificially depressed price of $0.77 per share.

C. Defendant Intentionally Hid Its Manipulative Spoofing Scheme

89. As described above, the manipulative process of spoofing requires that the true intent of the spoofer be hidden from the rest of the market. If other market participants knew that Baiting Orders were not *bona fide* orders but were instead entered solely to induce other traders to move the price of the stock, those other traders would naturally ignore the Baiting Orders when making trading decisions.

90. Defendant intentionally hid its manipulative spoofing scheme in order to achieve its illegal and improper goal of depressing the price of PHUN shares, and its success in manipulating that price demonstrates that its spoofing activity was concealed from the market.

D. Defendant's Transactions In PHUN Are Not Legitimate Market Making Activity

91. A market maker on Nasdaq is a broker-dealer that maintains firm bid and offer prices in a given stock by standing ready at all times to buy or sell round lots of that stock at publicly-quoted prices.[11] A Nasdaq market maker fulfills this obligation by entering quotations in the Nasdaq Market Center to buy and sell such security for its own account on a regular and continuous basis.[12]

92. Broker-dealers are registered as market makers on Nasdaq with respect to one or

[11] Nasdaq Website, available at https://www.Nasdaq.com/glossary/m/market-maker (last visited July 25, 2023).

[12] Listing Center, Nasdaq Website, available at https://listingcenter.Nasdaq.com/rulebook/Nasdaq/rules/Nasdaq%205000%20Series/market%20maker/EQUALS/#position (last visited July 25, 2023).

more particular securities, and under FINRA and SEC rules, are only considered to be "market makers" in the securities for which they are registered.[13]

93. Nasdaq rules require that a market maker "engage in a course of dealings for its own account to assist in the maintenance, insofar as reasonably practicable, of fair and orderly markets."[14] In fulfilling this obligation, Nasdaq requires that a market maker "enter and maintain a two-sided trading interest that is identified to the Exchange as the interest meeting the obligation and is displayed in the Exchange's quotation montage at all times."[15]

94. These rules reflect the principle that a market maker ordinarily seeks to maintain a flat inventory position – or purchases and sales of stock in roughly comparable amounts – to provide liquidity to customers or other broker-dealers and to avoid placing a directional bet on the stock price. As Defendant itself wrote in a comment letter to the Securities and Exchange Commission:

> If the Commission wishes to distinguish between legitimate market-making transactions and other transactions that are for proprietary, speculative purposes, one way may be to look at how the broker-dealer in fact behaves. A market-maker, as is well known, tends to stay "flat" whenever possible because it makes its money by profiting from spreads, not from taking a directionally biased position at market risk.[16]

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[13] FINRA Website, available at https://www.finra.org/rules-guidance/rulebooks/finra-rules/6320b (last visited July 25, 2023).

[14] Nasdaq Rule 5, available at https://listingcenter.nasdaq.com/rulebook/nasdaq/rules/Nasdaq%20Equity%202 (last visited July 25, 2023).

[15] *Id.* Moreover, "[a]fter an execution against its Two-Sided Obligation, a Nasdaq Market Maker must ensure that additional trading interest exists in the Exchange to satisfy its Two-Sided Obligation either by immediately entering new interest to comply with this obligation to maintain continuous two-sided quotations or by identifying existing interest on the Exchange book that will satisfy this obligation."

[16] Comment Letter re: Proposed Regulation SHO; File No. S7-23-03 by J.P. Morgan Securities Inc. and UBS Securities LLC (Jan. 30, 2004), available at https://www.sec.gov/rules/proposed/s72303/jpmorgan013004.htm. (last visited July 25, 2023).

For this reason, following a purchase of stock, one would expect a market maker engaging in *bona fide* market making activities to price sell-side orders of the stock aggressively to flatten its inventory position. By contrast, an asymmetry in order cancellation rates involving the stock is inconsistent with *bona fide* market making activities.

95. This is, in fact, how Defendant itself behaved when serving as a market maker in highly liquid securities that are not amenable to the sort of manipulation observed in PHUN. For example, when executing purchases in the popular exchange-traded fund QQQ in December 2022, Defendant priced its sell-side orders, on median, 97.96% as aggressive as the most aggressively priced sell orders on the Nasdaq order book. This sort of aggressive pricing in order, in Defendant's own words, to "stay flat whenever possible," is exactly what one would expect of a market maker.

96. But that is not how Defendant behaved when trading in PHUN shares. Plaintiff has reviewed all of Defendant's deanonymized Nasdaq order flow and executions in PHUN shares during the Relevant Period. Under Nasdaq rules, orders placed pursuant to a market maker's obligation to maintain "fair and orderly markets" must be deanonymized and attributable to the market maker.

97. After spoofed Executing Purchases in PHUN shares, Defendant's most aggressive sell-side orders were, on median, 86.67% as aggressive as the most aggressively priced sell orders on the Nasdaq order book. That is, Defendant's sell-side orders after purchasing PHUN shares were ***11% less*** aggressive than when engaged in ordinary market making. That relative passivity in pricing sell-side orders after spoofed Executing Purchases is consistent with Defendant using sell-side orders to maintain downward pressure on the share price rather than seeking to aggressively flatten their inventory as in *bona fide* market making.

98. Further evidence that Defendant was not acting as a *bona fide* market maker in

connection with its unlawful spoofing activity is demonstrated by comparing the aggressiveness of its sell side order pricing following non-spoofed purchases. Following these purchases, Defendant priced its sell-side orders, on median, 99.08% as aggressive as the most aggressively priced sell orders on the Nasdaq order book. Thus, Defendant's behavior when spoofing the shares of PHUN was fundamentally different from how it behaved when engaging in *bona fide* market making.

E. Defendant Acted With Scienter

99. Based on the alleged facts herein, Defendant acted with scienter. Defendant knowingly or with severe recklessness engaged in unlawful conduct intended to—and in fact did—deceive, manipulate, or defraud the market for PHUN shares and participants in that market, including Plaintiff.

100. ***First***, that Defendant specifically designed and implemented algorithmic trading programs to execute its spoofing schemes is indicative of its scienter. Its algorithms were programmed to, and did, generate trading patterns that involved the placement and cancellation of tens of millions of Baiting Orders to sell in the Limit Order Book that were never intended to be executed during the Relevant Period. Moreover, Defendant—which is a sophisticated entity utilizing cutting edge technology—closely monitored, modeled, and analyzed the performance, impact, and effects of its algorithmic trading programs throughout the Relevant Period, including the spoofing pattern which the algorithm executed again and again on PHUN stock during the Relevant Period with similar effects each time.

101. ***Second***, that Defendant's trading activities were approved by corporate officials sufficiently knowledgeable about the trading practices of Defendant such that Defendant knew that it was engaging in illegal spoofing is indicative of its scienter.

102. ***Third***, that as a registered broker-dealer, Defendant knew and/or was required to know that it was unlawful to place Baiting Orders to sell in a Limit Order Book that were never intended to be executed in order to trick market participants into selling shares of PHUN stock is indicative of its scienter. Indeed, UBS's website states that "[w]hen using or interacting with UBS as broker-dealer with respect to a transaction, clients must not" engage in activities prohibited by securities, which expressly include "non-bona fide activities to induce others to trade, … spoofing, [and] layering."[17]

103. ***Fourth***, that Defendant was obligated to and certified in its FINRA Report 3130s that it, in fact did, monitor, detect, and prevent manipulative or fraudulent trading is indicative of its scienter. As a registered broker-dealer, Defendant was required, pursuant to FINRA Rule 2020, to have internal policies, procedures and systems that detected and prohibited manipulative or fraudulent trading devices or schemes, and pursuant to FINRA Rules 5210, Supplementary Material .02; Rule 1220 and Exchange Rule 575, Disruptive Practices Prohibited, to detect and prevent manipulative or fraudulent trading that originated from algorithmic high-speed trading under the supervision and control of its firm. Indeed, during the Relevant Period, Defendant filed an "Annual Certification of Compliance and Supervisory Processes," pursuant to FINRA Report 3130, in which it confirmed that it:

> (A) establish[ed], maintain[ed] and review[ed] policies and procedures reasonably designed to achieve compliance with applicable FINRA rules, Municipal Securities Rulemaking Board ("MSRB") rules and federal securities laws and regulations; (B) modif[ied] such policies and procedures as business, regulatory and legislative changes and events dictate; and (C) test[ed] the effectiveness of such policies and procedures on a periodic basis, the timing and extent of which is reasonably designed to ensure continuing compliance with FINRA rules, MSRB rules and federal securities laws and regulations.

[17] UBS website, available at https://www.ubs.com/global/en/investment-bank/us-broker-dealer/order-handling-retail.html (last visited July 25, 2023).

104. ***Fifth***, that Defendant was less likely to aggressively price sell orders after spoofed Executing Purchases as compared to non-spoofed purchases is inconsistent with *bona fide* market making and is indicative of Defendant's scienter. This is particularly true given that Defendant acted aggressively in pricing sell orders in other securities during the same time period, demonstrating that it knew how to engage in true market making, despite not doing so in PHUN.

105. ***Sixth*****,** that Defendant "parked" its Baiting Orders behind *bona fide* sell orders by other market participants demonstrates that Defendant was not engaging in legitimate market activity and is indicative of Defendant's scienter. Parking involves placing Baiting Orders to sell behind *bona fide* sell orders placed by other unsuspecting traders. These *bona fide* orders serve as a barrier between ordinary demand for the security and the Baiting Orders, making it less likely that the Baiting Orders will execute in orders to purchase the security placed by other market participants. By parking the Baiting Orders, Defendant ensured that those Baiting Orders were extraordinarily unlikely to be executed, and thus shows that Defendant never intended for its Baiting Orders to be executed.

106. ***Seventh***, that Defendant's Baiting Orders frequently left Defendant with an imbalanced order book position favoring the sell side is indicative of Defendant's scienter. Despite these imbalanced order book positions, Defendant often did not sell ***any*** shares of PHUN after posting the Baiting Orders. This is consistent with the fictitious nature of the Baiting Orders and indicates that Defendant never intended to execute any of its numerous Baiting Orders; instead, Defendant placed the Baiting Orders in order to create artificial selling pressure and induce other market participants to submit additional sell orders, and thus artificially drive down the price of PHUN shares. This behavior is contrary to the behavior of an ordinary trader who buys when it thinks the price of a security is likely to go higher and sells when it thinks the price of a security

will go lower, and thus rarely, if ever, develops such an imbalance that never get executed.

107. ***Eighth,*** that there was a short time period between the placement and cancellation of its Baiting Orders is indicative of Defendant's scienter. Following each spoofed Executing Purchase, Defendant placed and then cancelled the Baiting Orders within seconds, and at times microseconds and milliseconds. This practice, which occurred over one thousand times during the Relevant Period, indicates that Defendant never intended to execute the Baiting Orders.

108. ***Ninth***, the concentration of cancelled Baiting Orders during the limited period when each spoofing event occurred is indicative of Defendant's scienter. Following each spoofed Executing Purchase, Defendant cancelled all of the Baiting Orders, sometimes amounting to millions of sell-side shares in a matter of seconds and sometimes milliseconds, all of which had been placed by Defendant at most mere minutes earlier.

109. ***Tenth***, the size of the Baiting Orders that were cancelled, in comparison to the size of bona-fide sell-side orders that were executed by Defendant is indicative of Defendant's scienter. Prior to each spoofed Executing Purchase, Defendant placed and subsequently cancelled a median of 9,862 shares in Baiting Orders while according to available data executed a median of 3 shares in sell-side orders. The stark contrast between the share volume of Baiting Orders and executed sell-side orders is additional and further indication that Defendant was manipulating the market by using Baiting Orders as tools to generate artificial prices, rather than making a genuine attempt to sell PHUN shares.

110. ***Eleventh***, the ratio of Defendant's cancelled Baiting Orders compared to Defendant's executed *bona fide* orders to sell is indicative of Defendant's scienter. Prior to each spoofed Executing Purchase, Defendant placed and subsequently cancelled a median of 9,862 sell-side shares in Baiting Orders while, according to data available to Plaintiff, executed a median of

3 shares in sell-side orders. An extremely high sell-side cancellation rate, such as the 99.97% here, is a strong indication that Defendant never intended to execute those Baiting Orders.

111. ***Twelfth***, the size of Defendant's executed sell-side orders compared to the size of Defendant's Executing Purchases is indicative of Defendant's scienter. On median, Defendant executed 100 shares in each Executing Purchase, while in contrast Defendant executed 3 shares in sell-side orders in attributed Nasdaq orders in the minute following those purchases. The stark contrast between the share volume of Defendant's Executing Purchases and Defendant's sell-side executions is additional and further indication that Defendant was manipulating the market by using Baiting Orders as tools to generate artificial prices at which to execute spoofed purchases at favorable prices.

112. ***Thirteenth***, the ratio of Defendant's executed sell-side orders compared to Defendant's Executing Purchases is indicative of Defendant's scienter. On median, Defendant executed 100 shares in each Executing Purchase, while in contrast Defendant executed 3 shares in sell-side orders in attributed Nasdaq orders in the minute following those purchases. A lopsided ratio, such as 100-to-3 as here, is additional and further indication that Defendant never intended to execute its Baiting Orders to sell.

113. ***Fourteenth,*** that Defendant placed tens of millions of Baiting Orders and purchased hundreds of thousands of PHUN shares at spoofed prices during the Relevant Period, and often multiple episodes per trading day, is indicative of Defendant's scienter. The repetition of this pattern of placing fictitious Baiting Orders which created artificial prices, Executing Purchases at the artificial prices, and then cancelling all of the Baiting Orders, is indicative of Defendant's scienter.

114. ***Fifteenth,*** that Defendant's behavior resulted in asymmetric order cancellation

rates is inconsistent with *bona fide* market-making and is indicative of Defendant's scienter. Over Cancellation Periods, on average, Defendant cancelled 81% of the sell-side orders created during Baiting Periods, but only 64% of the buy-side orders created during Baiting Periods.

115. ***Sixteenth***, that there is an extremely low statistical likelihood that the price variations for each of the Spoofing Episodes occurred naturally is indicative of Defendant's scienter. The market impact of these Spoofing Episodes was material and statistically significant.

116. ***Finally***, that Defendant had a strong motive to spoof the shares of PHUN stock and engage in its manipulative scheme is indicative of Defendant's scienter. By manipulating down the share price of PHUN, Defendant was able to make at least hundreds of millions in aggregate profits by purchasing tens of millions of shares of PHUN at artificially depressed prices.

F. Loss Causation And Standing

117. Plaintiff sold over ~~34~~40 million shares of PHUN stock in hundreds of distinct transactions at share prices artificially depressed by Defendant's manipulative spoofing during and following the Relevant Period, including as late as April 27, 2023. ~~A table listing each transaction in which Plaintiff sold shares of stock over the Relevant Period is attached as Exhibit 2.~~*See* Exhibit 2.[18]

118. ~~On numerous occasions during the Relevant Period, Plaintiff sold shares~~Millions of ~~PHUN stock in intraday executions which~~those sales occurred just seconds ~~and minutes~~or hours after Defendant's unlawful spoofing activity~~, such that an artificial decline in the~~ caused

[18] Plaintiff anticipates that discovery will reveal that Defendant engaged in additional spoofing activity during times when Plaintiff sold millions of additional shares of stock at prices artificially depressed by such spoofing activity. Indeed, Plaintiff has learned that Defendant engaged in spoofing of Phunware stock on July 10 and 13, 2023, within four minutes and within fifty seconds, respectively, of Plaintiff's sales on those dates of thousands of shares of stock at artificially depressed prices.

Phunware's share price ~~immediately prior~~ to ~~the sale caused~~ artificially decline, causing Plaintiff to suffer losses. A list of ~~these~~Plaintiff's intraday executions is given in the chart below.[19]

~~te~~	Time of First Sell-Side Baiting Order	~~Spoof~~ Time ~~(~~of Executing Purchase~~)~~	Executing Time of Sale by Plaintiff	Difference ~~Minutes~~Time First Sell-S Baiting Or
1/26/21	~~15:55:46.64814~~09:30:01.117182118	~~17:43:48.89114~~09:30:02.620695849	~~108.04~~09:30:01.265	00:00:00.1
1/26/21	~~15:56:26.75312~~309:30:01.117182118	~~17:43:48.89114~~09:30:02.620695849	~~107.37~~09:30:04.381	00:00:03.2
1/26/21	~~15:56:58.38765~~609:30:01.117182118	~~17:43:48.89114~~09:30:02.620695849	~~106.84~~09:30:04.392	00:00:03.2
26/21	09:30:01.~~123261~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:04.400	00:00:03.2
26/21	09:30:01.~~133721~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:04.880	00:00:03.7
26/21	09:30:01.~~133737~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:04.890	00:00:03.7
26/21	09:30:01.~~134776~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:04.900	00:00:03.7
26/21	09:30:01.~~152920~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.617	00:00:05.5
26/21	09:30:01.~~152942~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.627	00:00:05.5
26/21	09:30:01.~~154146~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.633	00:00:05.5
26/21	09:30:01.~~154164~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.640	00:00:05.5
26/21	09:30:01.~~179301~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.645	00:00:05.5
26/21	09:30:01.~~183063~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.650	00:00:05.5
26/21	09:30:01.~~191782~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:06.657	00:00:05.5
26/21	09:30:01.~~201872~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.166	00:00:09.0
26/21	09:30:01.~~204190~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.175	00:00:09.0
26/21	09:30:01.~~212080~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.180	00:00:09.0
26/21	09:30:01.~~216473~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.262	00:00:09.1
26/21	09:30:01.~~216490~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.268	00:00:09.1
26/21	09:30:01.~~216517~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.274	00:00:09.1
26/21	09:30:01.~~327084~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.280	00:00:09.1
26/21	09:30:01.~~341409~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.285	00:00:09.1
26/21	09:30:01.~~350919~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:10.290	00:00:09.1
26/21	09:30:01.~~351191~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:12.406	00:00:11.2
26/21	09:30:01.~~354481~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:12.415	00:00:11.2
26/21	09:30:01.~~356463~~117182118	09:~~33:24.670265~~30:02.620695849	~~3.39~~09:30:23.461	00:00:22.3
26/21	09:30:~~04.38648~~301.117182118	09:~~33:24.670265~~30:02.620695849	~~3.34~~09:30:23.471	00:00:22.3

[19] ~~This~~ The following chart of order executions reflects the exact time at which specific sales of PHUN stock were executed. They are thus subsumed within the blocks of sales of shares listed in Exhibit 2.

ate	Time of First Sell-Side Baiting Order	~~Spoof~~ Time ~~(~~of Executing Purchase~~)~~	Executing Time of Sale by Plaintiff	Difference ~~Minutes~~Time First Sell-S Baiting Or
26/21	09:30:~~04.41868~~501.117182118	09:~~33:24.670265~~30:02.620695849	~~3.34~~09:30:23.481	00:00:22.3
26/21	09:30:~~04.42720~~801.117182118	09:~~33:24.670265~~30:02.620695849	~~3.34~~09:30:23.676	00:00:22.5
26/21	09:30:~~08.01252~~801.117182118	09:~~33:24.670265~~30:02.620695849	~~3.28~~09:30:23.682	00:00:22.5
26/21	09:30:~~08.01392~~301.117182118	09:~~33:24.670265~~30:02.620695849	~~3.28~~09:30:23.688	00:00:22.5
26/21	09:30:~~08.01440~~001.117182118	09:~~33:24.670265~~30:02.620695849	~~3.28~~09:30:23.694	00:00:22.5
26/21	09:30:~~08.01475~~801.117182118	09:~~33:24.670265~~30:02.620695849	~~3.28~~09:30:23.701	00:00:22.5
26/21	09:30:~~10.31899~~001.117182118	09:~~33:24.670265~~30:02.620695849	~~3.24~~09:30:23.706	00:00:22.5
26/21	09:30:~~10.34814~~601.117182118	09:~~33:24.670265~~30:02.620695849	~~3.24~~09:30:23.713	00:00:22.5
1/26/21	09:30:~~36.32372~~601.117182118	09:~~35:07.874912~~30:02.620695849	~~4.53~~09:30:23.718	00:00:22.6
1/26/21	09:30:~~36.35818~~601.117182118	09:~~35:07.874912~~30:02.620695849	~~4.53~~09:30:23.723	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.728	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.733	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.739	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.744	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.749	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.754	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.760	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.766	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.771	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.776	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.781	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.786	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.791	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:23.797	00:00:22.6
6/21	09:30:01.117182118	09:30:02.620695849	09:30:25.467	00:00:24.3
6/21	09:30:01.117182118	09:30:02.620695849	09:30:25.476	00:00:24.3
6/21	09:30:01.117182118	09:30:02.620695849	09:30:25.486	00:00:24.3
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.059	00:00:35.9
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.163	00:00:36.0
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.173	00:00:36.0
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.182	00:00:36.0
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.217	00:00:36.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.226	00:00:36.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.236	00:00:36.1

ate	Time of First Sell-Side Baiting Order	~~Spoof~~ Time ~~(~~of Executing Purchase~~)~~	Executing Time of Sale by Plaintiff	Difference ~~Minutes~~Time First Sell-S Baiting Or
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.248	00:00:36.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.266	00:00:36.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:37.271	00:00:36.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:41.146	00:00:40.0
6/21	09:30:01.117182118	09:30:02.620695849	09:30:41.281	00:00:40.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:41.298	00:00:40.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:43.619	00:00:42.5
6/21	09:30:01.117182118	09:30:02.620695849	09:30:47.860	00:00:46.7
6/21	09:30:01.117182118	09:30:02.620695849	09:30:47.880	00:00:46.7
6/21	09:30:01.117182118	09:30:02.620695849	09:30:50.438	00:00:49.3
6/21	09:30:01.117182118	09:30:02.620695849	09:30:50.447	00:00:49.3
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.297	00:00:50.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.303	00:00:50.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.308	00:00:50.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.314	00:00:50.1
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.319	00:00:50.2
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.324	00:00:50.2
6/21	09:30:01.117182118	09:30:02.620695849	09:30:51.329	00:00:50.2
6/21	09:30:01.117182118	09:30:02.620695849	09:30:58.822	00:00:57.7
6/21	09:30:01.117182118	09:30:02.620695849	09:30:58.829	00:00:57.7
6/21	09:30:01.117182118	09:30:02.620695849	09:30:58.835	00:00:57.7
6/21	09:30:01.117182118	09:30:02.620695849	09:30:58.840	00:00:57.7
6/21	09:30:01.117182118	09:30:02.620695849	09:30:58.846	00:00:57.7
6/21	09:30:01.117182118	09:30:02.620695849	09:31:04.174	00:01:03.0
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.389	00:01:05.2
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.396	00:01:05.2
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.402	00:01:05.2
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.407	00:01:05.2
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.412	00:01:05.2
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.419	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.427	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.435	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.440	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.448	00:01:05.3

ate	Time of First Sell-Side Baiting Order	~~Spoof~~ Time ~~(~~of Executing Purchase~~)~~	Executing Time of Sale by Plaintiff	Difference ~~Minutes~~Time First Sell-S Baiting Or
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.454	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.461	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.468	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.473	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.479	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.484	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.490	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.496	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.504	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.510	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.515	00:01:05.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.521	00:01:05.4
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.526	00:01:05.4
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.534	00:01:05.4
6/21	09:30:01.117182118	09:30:02.620695849	09:31:06.541	00:01:05.4
6/21	09:30:01.117182118	09:30:02.620695849	09:31:08.544	00:01:07.4
6/21	09:30:01.117182118	09:30:02.620695849	09:31:08.555	00:01:07.4
6/21	09:30:01.117182118	09:30:02.620695849	09:31:13.854	00:01:12.7
6/21	09:30:01.117182118	09:30:02.620695849	09:31:15.088	00:01:13.9
6/21	09:30:01.117182118	09:30:02.620695849	09:31:15.462	00:01:14.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:15.472	00:01:14.3
6/21	09:30:01.117182118	09:30:02.620695849	09:31:15.482	00:01:14.3
1/21	15:53:52.123116845	15:55:46.648149	17:43:48.891144	01:49:56.7
1/21	15:54:37.251990255	15:56:26.753123	17:43:48.891144	01:49:11.6
1/21	15:55:07.424418204	15:56:58.387656	17:43:48.891144	01:48:41.4
6/21	09:30:00.228186415	09:30:01.123261	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.133721	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.133737	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.134776	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.152920	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.152942	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.154146	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.154164	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.179301	09:33:24.670265	00:03:24.4

ate	Time of First Sell-Side Baiting Order	~~Spoof~~ Time ~~(~~of Executing Purchase~~)~~	Executing Time of Sale by Plaintiff	Difference ~~Minutes~~Time First Sell-S Baiting Or
6/21	09:30:00.228186415	09:30:01.183063	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.191782	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.201872	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.204190	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.212080	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.216473	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.216490	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.216517	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.327084	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.341409	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.350919	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.351191	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.354481	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:01.356463	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:04.386483	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:04.418685	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:04.427208	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:08.012528	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:08.013923	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:08.014400	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:08.014758	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:10.318990	09:33:24.670265	00:03:24.4
6/21	09:30:00.228186415	09:30:10.348146	09:33:24.670265	00:03:24.4
7/21	09:30:01.532417730	09:30:36.323726	09:35:07.874912	00:05:06.3
7/21	09:30:01.532417730	09:30:36.358186	09:35:07.874912	00:05:06.3

119. In addition, on February 12, 2021, Plaintiff sold 11.7 million shares at a price negatively impacted by Defendant's ~~fraudulent~~spoofs less than 10 trading ~~activities~~ minutes prior.

120. Defendant's manipulative spoofing had both ~~a temporary~~an immediate and a long-term adverse effect on the market price of PHUN stock. ~~The artificially depressed price of a Spoofing Episode may generally not fully recover to~~

~~119.~~ As detailed below, Defendant's spoofing caused an immediate and sustained

decline in the price of PHUN shares that ~~existed prior to the Spoofing Episode. When spoofing events occur continuously throughout the day and continue without interruption over a protracted period of time, the long-term cumulative effect of spoofing places enormous downward pressure on the market price of a security, which is persistent and long-lasting.[20]~~

~~120.~~121. ~~The impact of this~~harmed Plaintiff when it sold its shares in temporal proximity to Defendant's spoofing. The impact of Defendant's spoofing activity extended beyond the specific spoofing cycle (*i.e.*, orders, trades, and cancellations) because the market neither immediately nor fully rebounded from the manipulated prices once each of the Spoofing Episodes was completed.

122. ~~Because the~~The negative price impact of Defendant's spoofing activity ~~was~~ – over 1,000 Spoofing Episodes on 91 trading days during the Relevant Period – did not ~~limited to the time period~~ dissipate immediately following the Baiting Orders, however. Rather, as the quantitative analysis herein demonstrates, the cumulative effect of Defendant's sustained spoofing placed enormous downward pressure on the market price of PHUN shares, which persisted for at least 60 days. This is confirmed by the economic literature which establishes that the artificially depressed price caused by spoofing generally does not fully recover to the price that existed prior to the spoofing when spoofing events occur continuously throughout the day and continue without interruption over a protracted period of time.[21]

~~[20] Whether the prevailing market sentiment towards PHUN at any particular moment was trending in a positive or negative direction does not alter the fact that the Defendant's spoofing caused a negative impact on the price of PHUN shares, depressing the price from what it would have been in an unmanipulated market. Whether the market was reacting at any particular instant to positive or negative news regarding PHUN, the market price of its stock was lower than it would have been throughout the Relevant Period absent Defendant's manipulative conduct.~~

[21] Whether the prevailing market sentiment towards PHUN at any particular moment was trending in a positive or negative direction does not alter the fact that the Defendant's spoofing caused a

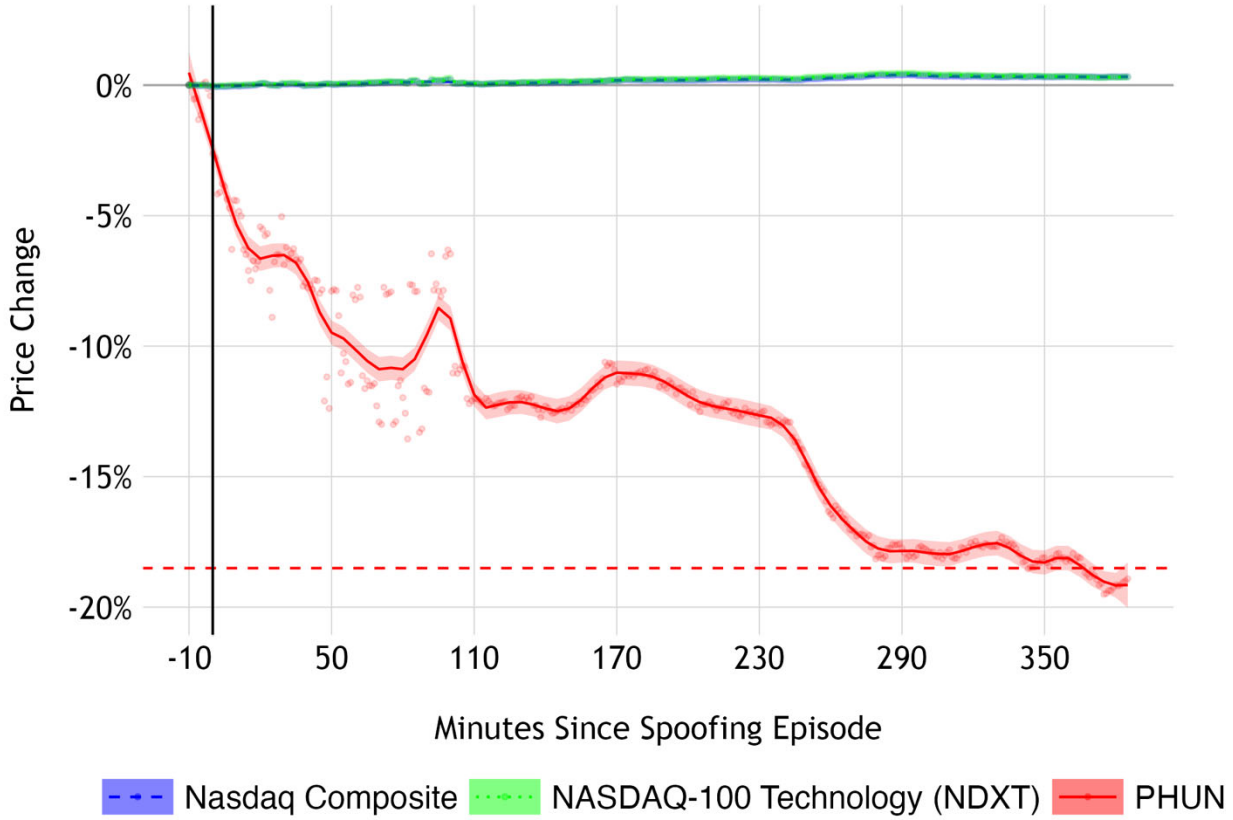
~~121.~~123. Accordingly, the prices at which Plaintiff sold all of its stock throughout the entire Relevant Period (Exhibit 2) were negatively affected by Defendant's spoofing that occurred prior to Plaintiff's sales, regardless of how much time elapsed from a spoof to sale.

124. The following figure shows the average price impact of Spoofing Episodes over the minutes following each Spoofing Episode. The figure also shows the average price changes in the Nasdaq Composite Index (NASX) and in the Nasdaq-100 Technology Index (NDXT),[22] demonstrating that the negative average price impact on PHUN was the result of Defendant's spoofing rather than of market-wide conditions.[23] (95% confidence intervals are illustrated by the shaded regions around the solid lines.)

negative impact on the price of PHUN shares, depressing the price from what it would have been in an unmanipulated market. Whether the market was reacting at any particular instant to positive or negative news regarding PHUN, the market price of its stock was lower than it would have been throughout the Relevant Period absent Defendant's manipulative conduct.

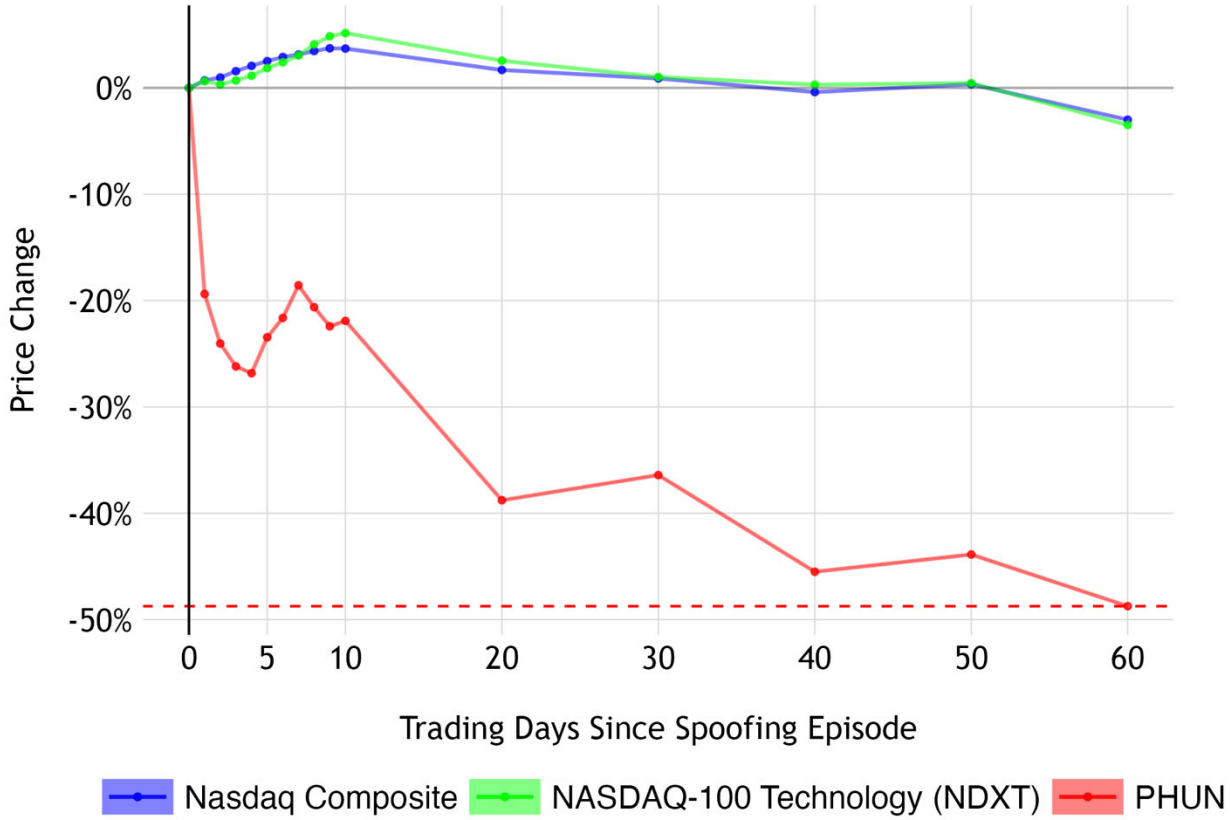
[22] NASX and NDXT are standard and appropriate benchmarks for PHUN. A regression of PHUN's daily returns (percentage price changes) on the daily returns of NASX and on the daily returns of NDXT yields positive and statistically significant coefficients of 1.07 ($p = 0.0528$) and 0.912 ($p = 0.0284$), respectively.

[23] Because the Spoofing Episodes occurred at short, discrete intervals in time, news about PHUN or other firm-specific events cannot explain these price declines. For the price decline following Spoofing Episodes to be driven by these events, the event would need to occur at exactly the same time as the Spoofing Episodes. But these events are not occurring at the same time as Spoofing Episodes. Thus, the price impact of those events is incorporated into the price of PHUN shares at a different point in time—either long before the Spoofing Episodes or long after, but not at the exact moment of those Spoofing Episodes.



125. As the above figure shows, the periods after Spoofing Episodes were characterized by a price decline followed by a *partial* reversion that provided Defendant an opportunity to profit from its purchases (including Executing Purchases) at depressed prices. Following the *partial* reversion, PHUN's share price stabilized, but at a *still depressed* level.

126. The sustained, repetitive, and continuous stream of Defendant's spoofing had a persistent long-term negative impact on the price of PHUN shares. The following figure shows the average change in Phunware's share price from the 2 minutes prior to Spoofing Episodes to the trading days thereafter, as well as the average changes in the NASX and NDXT over the same periods:



127. As the above figure shows, the negative price impact of Spoofing Episodes persisted at least sixty (60) trading days following the Spoofing Episodes, during times when both NASX and NDXT were increasing in value or remaining flat. After twenty (20) days, PHUN's price decline began to stabilize, but persisted at a depressed price for at least an additional forty (40) days and did not revert to its pre-Spoofing Episode price in the following trading days. The gradual stabilization of the decline in the price of PHUN shares from between twenty (20) to sixty (60) trading days after the Spoofing Episodes makes clear that the decline was not driven by negative news affecting the price of PHUN shares during the Relevant Period, because such news would have continued to cause a further price decline on the dates following Spoofing Episodes.

128. As Nobel prize winning economist Professor Paul Milgrom explains, this price decline persists "[b]ecause manipulative trades are viewed by market participants as potentially

informed, and potentially informed trades can result in permanent price impact, [therefore] manipulative trades can lead to permanent price impact." *See supra* ¶ 35 (the Milgrom Report is attached as Exhibit 3).[24]

129. The Milgrom Report discusses the extensive economic literature establishing that the price impact of *any* form of trade-based manipulation, including spoofing, typically does not fully reverse. This conclusion applies to spoofing for two reasons. First, peer-reviewed research has found that sell-side order cancellations drive the price ***up*** by ***less*** than new sell-side orders drive the price ***down***.[25] For this reason, the impact of Baiting Orders is not likely to dissipate merely because those orders were subsequently cancelled. Second, manipulative spoofing causes the execution of "*trades*," not only the placement of orders, because Baiting Orders induce other market participants to sell shares at artificially depressed transaction prices.

130. The economic literature recognizes that in modern securities markets, every transaction occurs between a ***liquidity maker*** and a ***liquidity taker***.[26] The term "liquidity maker" refers to the party who places an order to buy or sell shares that is ***non-marketable***. A "non-marketable" order has a price that is too low (for a purchase) or too high (for a sale), relative to the current willingness of other market participants to transact. For example, suppose the last trading price of a security was $9.99 and the best bid—*i.e.*, the highest price that buyers are willing

[24] *See* Basil Williams & Andrzej Skrzypacz, Spoofing in Equilibrium, at 3 (Feb. 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3742327 (disagreeing that spoofing is "an out-of-equilibrium phenomenon that can be completely neutralized by sophisticated traders once understood by all market participants").

[25] Jonathan Brogaard, Terrence Hendershott & Ryan Riordan, *Price Discovery without Trading: Evidence from Limit Orders* 74 J. FIN. 1583, 1635 (2019) (magnitude of price impact of order placement exceeds magnitude of price impact of order cancel).

[26] Yong Chao, Chen Yao & Mao Ye, *Discrete Pricing and Market Fragmentation: A Tale of Two-Sided Markets*, 105 AM. ECON. REV. PAP. & PROC. 196 (2017) ("A trader can act as a liquidity maker by posting a limit order with a specified price and quantity. A trade occurs when a liquidity taker accepts the terms of a limit order.").

to pay—is $9.98 and the best offer—*i.e.*, the lowest price that sellers are willing to accept—is $10.00 per share. If a market participant places a buy order at a price of $9.99 (or less) per share, that order will be ***non-marketable*** because there is no seller who is willing to sell at $9.99 per share at that point in time. That buy order will, however, remain in the Limit Order Book, ready to transact with a seller who is willing to sell shares at a price of $9.99 (or less) per share.

131. By contrast, the term "liquidity taker" refers to the party who places an order to buy or sell shares that is ***marketable***. A "marketable" order has a price that is high enough (for a purchase) or low enough (for a sale), relative to the current willingness of other market participants to transact. Returning to the prior example, a buy order at a price of $10.00 (or more) per share would be a marketable order because a market participant had previously submitted an existing sell order at a price of $10.00 per share. Every transaction in the market occurs between a marketable and a non-marketable order, but prices generally move in the direction of marketable orders. In the preceding example, a marketable buy order at $10.00 per share would execute against a non-marketable sell order at $10.00 per share, causing the price to increase from $9.99 to $10.00 per share.[27]

132. ***Every Executing Purchase*** alleged in this Complaint consists of a non-marketable buy order executing against a marketable sell order by another market participant, leading to a

[27] In general, non-marketable buy and sell orders typically are placed on either side of the last transaction price. Thus, if the last transaction price was $9.99 (as in this example), a non-marketable buy order typically would be placed at $9.98 (or less) and a non-marketable sell order typically would be placed at $10.00 (or more). *See, e.g.*, Lawrence R. Glosten & Paul R. Milgrom, *Bid, Ask and Transaction Prices in a Specialist Market with Heterogeneously Informed Traders*, 14 J. FIN. ECON. 71 (1985) (deriving bid/ask spread). Transaction prices generally move in the direction of marketable orders because marketable buy (or sell) orders execute against non-marketable sell (or buy) orders which are above (or below) the previous transaction price.

decline in PHUN's share price.[28] For this reason, Executing Purchases reflect the execution of aggressively priced sell orders which were induced by the Baiting Orders. Accordingly, the spoofing activity consists of *trade-based manipulation* whereby Baiting Orders induced market participants to place marketable sell orders that executed against Defendant's non-marketable Executing Purchases. *Supra* ¶¶ 52, 59, 65, 72, 78, 85.

133. The placement of non-marketable buy orders after the completion of a Spoofing Episode induced only a ***partial price reversion*** that did not fully unwind the impact of Defendant's manipulative spoofing. Therefore, prices of PHUN stock did not fully revert to the market level, even though these partial price reversions provided Defendant an opportunity to profit from buying additional PHUN shares.

134. Because the price of PHUN shares may have been higher or lower after any single Spoofing Episode for reasons that would have occurred absent Defendant's spoofing—such as increasing investor enthusiasm—the price impact of Defendant's spoofing activity is not measured by what happened to the stock price in a given instance, but by the average price impact over those episodes, as shown *supra* ¶ 124. Otherwise, the determination of whether spoofing affected the price would be confounded by factors, like changes in investor enthusiasm, that would have occurred even if no spoofing had occurred at all.

135. Moreover, the Milgrom Report explains that manipulative trading like spoofing can cause a permanent price impact to persist even after the manipulative trades are "unwound" through subsequent trades to realize profits. This is because of asymmetry in the nature of the

[28] In Nasdaq ITCH data, only non-marketable limit orders are included in the data—the marketable side of the order is simply reflected as an execution of the non-marketable order included in the data. The execution of limit orders by the Defendant thus reflects the execution of non-marketable orders by definition.

manipulative trades and the nature of the unwinding trades:

> There is, however, no symmetry in the manipulative trade and its unwinding. A manipulative trader who wants, for example, to raise a price will buy in a way that maximizes the price impact. However, when unwinding the trade, that same trader will seek to minimize the price impact to avoid losses. Therefore, the upward effect can be expected to exceed the downward effect from unwinding—and that difference may represent a permanent effect.

136. Defendant engaged in asymmetric behavior that yielded an asymmetric price impact between manipulative Spoofing Episodes and the unwinding of their manipulative conduct. The total share volume of sell-side Baiting Orders exceeded the share volume of buy-side Executing Purchases by over ***128-fold***. *Supra* ¶ 43 (83 million shares of Baiting Orders to 647 thousand shares of Executing Purchases during Spoofing Episodes). In addition, the median share volume of sell-side orders exceeded the median share volume of new buy-side orders placed during Spoofing Episodes by ***145%***.[29] As such, the price impact of spoofed Baiting Orders was not fully unwound: the downward pressure applied by sell-side orders exceeded the upward pressure applied by buy-side orders. As Professor Milgrom explains, this difference between the sell-side and buy-side pressure yields a persistent and permanent price impact.

137. The "permanent price impact" that Professor Milgrom discussed as resulting from manipulative trading is established in the economic literature and is not limited to same-day effects.[30] For example, one heavily cited peer-reviewed study shows that "both ask and bid tend

[29] Over the two minutes prior to each Spoofing Episode, Defendant placed new sell-side orders for a median of 124,771 shares vs. 50,899 shares in new buy-side orders.

[30] Dr. Milgrom used the term "permanent price impact" to discuss an expert report previously submitted in that litigation by Dr. Craig Pirrong, which described peer-reviewed literature *that found the price impact of market manipulation lasted for more than one day*. Expert Report of Dr. Craig Pirrong, *Alaska Electrical Pension Fund v. Bank of America,* No. 14 Civ. 7126 (JMF)(S.D.N.Y.), ECF No. 503-4, Aug. 2, 2017, at *22 n. 14 ("Carole Comerton-Forde and Talis J. Putnins, *Measuring Closing Price Manipulation*, 20 J. FIN. INTERMEDIATION (2011) 135, present empirical evidence on the price effects of 184 manipulations of the closing prices on US

to significantly increase (decrease) after the arrival of a buy (sell) limit order," "quotes converge to a (new) permanent level" and "large volumes overbidding the prevailing quote cause a long-term upward movement of the bid."[31]

138. The following Section describes specific examples of dates on which Plaintiff sold shares in the seconds and minutes following Defendant's spoofing activity and explains how Defendant's spoofing activity drove down the price of PHUN shares on those dates, causing Plaintiff to sell shares at artificially depressed prices.

1. January 26, 2021

139. As listed in Exhibit 2, Plaintiff sold a total of 1,940,000 shares of PHUN on January 26, 2021. Among those sales included sale transactions at 09:30:01.265am and 09:30:04.381am, which were seconds after spoofing activity by Defendant just after the opening of trading that day that culminated in an Executing Purchase at 09:30:02.620695849am at a price of $2.14 per share. Just prior to that spoofing activity, at 9:26am (during pre-market trading), the price of PHUN shares was $2.23 per share. Defendant's Executing Purchase thus occurred at a decline of 4% from the pre-spoofing price. From 09:30:01.265am to 09:30:51.329am, Plaintiff sold 36,157 shares of PHUN at prices ranging from $2.12 to $2.22 per share—a decline of as much as 5% from the pre-spoof level. Defendant's spoofing activity caused Plaintiff to suffer losses by selling shares at prices artificially depressed by that activity, notwithstanding the partial reversion of the share price from $2.12 to $2.22 per share over that time interval.

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and Canadian stock exchanges. During these manipulations, traders bought large quantities of stock shortly before the close. Comerton-Forde and Putnins find that (a) stock prices rose significantly at the close, and (b) the increases were only partially reversed the next day. The fact that the reversals were only partial indicates that the manipulations had a permanent effect on prices.") (emphasis added).

[31] Nikolaus Hautsch & Ruihong Huang, *The Market Impact of a Limit Order*, 36 J. ECON. DYN. & CNTRL 501, 511, 5134 (2012).

140. While PHUN's share price partially recovered shortly thereafter, the recovery was brief, and the price continued to decline as a result of Defendant's spoofing activity. From 10:12:06.747am—less than 45 minutes after Defendant's Baiting Orders—to 11:18:13.697am that day, Plaintiff sold an additional 1,313,464 shares at artificially depressed prices as low as $1.94 per share.

141. PHUN's share price decline on January 26, 2021, cannot be explained by other company-specific facts, circumstances or events. A search of news databases and SEC filings on Factiva shows that there was no corporate news or disclosures which could explain the price decline on the morning of January 26, 2021. There were no SEC filings in the days immediately before and after January 26, and there were no corporate disclosures that day. The Company's chief operating officer spoke at an investors' forum at 1:00pm Eastern Time that day, but that was long after the price decline had already occurred.

142. Nor can PHUN's share price decline on January 26, 2021, be explained by other industry-specific or market-wide facts, circumstances or events. On January 26, 2021, the Nasdaq Composite Index finished the day approximately flat, and intraday price movements were insignificant. The Nasdaq-100 Technology Index declined by 1% that day, and the price change from 9:30am to 11:30am was a decline on the order of 0.58%. By contrast, the decline in the price of PHUN shares over that window was approximately 5.9%—more than 10 times as large as the decline of the Nasdaq-100 Technology Index.

143. The decline in PHUN's share price on January 26, 2021, was not caused by the sale of shares by Plaintiff. If Plaintiff were driving down the price of PHUN shares by selling those shares, successive sales would have occurred at declining prices. However, that day, ***over 94%*** of sales by the Plaintiff were made ***at the same or higher price*** as the preceding sale.

2. October 26, 2021[32]

144. As listed in Exhibit 2, Plaintiff sold a total of 5,394,697 shares of PHUN on October 26, 2021. Among those sales included a sale transaction at 09:33:24.670265am, which was three minutes after a slew of spoofing activity by Defendant just after the opening of trading that day that culminated in ***thirty-seven (37)*** Executing Purchases by Defendant from 09:30:01.123261am to 09:30:10.348146am. Just prior to that spoofing activity, at 9:28:03am (during pre-market trading), the price of PHUN shares was $6.86 per share. As noted *supra* ¶ 59, at 09:30:04.427209am, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 50 shares, at a price of $6.25 per share. Defendant's final Executing Purchase at 09:30:10.348146am occurred at a price of $6.11 per share—a decline of 11% from the pre-spoofing price.

145. Unaware of Defendant's onslaught of spoofing activity that morning, Plaintiff continued to sell shares. Just three minutes later, at 09:33:24.670265am, Plaintiff sold 1,200 shares of PHUN at a price of $6.29 per share—a decline of 8.3% from the pre-spoof level. Defendant's spoofing activity caused Plaintiff to suffer losses by selling shares at prices artificially depressed by that activity, notwithstanding the partial reversion of the price from $6.11 to $6.29 per share.[33]Within the first ***fifteen minutes*** of Defendant's spoofing—from 09:33:24.670266am to 09:44:08.660946am—Plaintiff sold a total of ***1,162,063*** shares at prices as high as $6.485 per share—still well below the pre-spoof price, but high enough to yield Defendant a profit from

[32] Defendant also engaged in spoofing on (1) October 21, 2021, and Plaintiff sold 8 million shares of its stock that same day, and (2) October 27, 2021, and Plaintiff sold over 2.7 million shares of its stock that same day (*supra* ¶¶ 62-68), at prices that would have been higher, but for the negative price impact of Defendant's spoofing, *see* Exhibits 1 and 2.

[33] Moreover, as noted *supra* in ¶ 61, Defendant also sold 20 shares at a price of $6.40 per share at 09:30:21am on October 26, 2021, which would have generated a return of 2.40% on Defendant's Executing Purchases at the artificially depressed price of $6.25 per share.

Executing Purchases at prices such as $6.11 and $6.25 per share—to as low as $5.70 per share. Defendant's spoofing activity induced a crash in the price of PHUN shares on October 26, 2021. Within ***one hour*** of Defendant's spoofing—from 09:33:24.670266am to 10:07:27.655291am—Plaintiff sold a total of ***3,665,871*** shares at prices as low as $4.51. The price of PHUN shares never recovered to its pre-spoof level that day, causing the remainder of Plaintiff's sales that day to occur at prices artificially depressed by Defendant's spoofing.

146. Neither the disclosure of Plaintiff's sales nor the sales themselves explain the price decline on October 26, 2021. These sales on October 26, 2021, were made pursuant to an "at-the-market offering" after a substantial price increase the preceding trading day. As required under the federal securities laws, Plaintiff had previously disclosed that it entered into an At Market Issuance Sales Agreement dated April 7, 2021 with B. Riley Securities, Inc. Sales of shares of common stock on October 26, 2021, were made pursuant to that agreement. The market reaction to the disclosure of the agreement via a Form 424B5 filing at 17:26:41 on April 7, 2021, was flat: the price of PHUN shares was $1.99 per share one hour before that disclosure, $2.00 immediately after that disclosure, and ended the day at $1.96, demonstrating that the market did not view Plaintiff's at-the-market offering negatively.

147. PHUN's share price decline on October 26, 2021, cannot be explained by other company-specific facts, circumstances or events. A search of news databases and SEC filings on Factiva shows that there was no corporate news or disclosures which could explain the price decline on the morning of October 26, 2021. There were no SEC filings in the days immediately before and after October 26, 2021, and there were no corporate disclosures that day. The first Reuters publication on the Company's at-the-market offering occurred at 9:33am, well after much of the price decline had already occurred. Later that day, news reports were written on the price

decline that day, which noted the Company's sale of shares, notwithstanding the absence of any market reaction to the announcement of the sale itself. Defendant's manipulative spoofing deceived not only Plaintiff but the news media as well regarding the true cause of the decline in the price of PHUN shares.

148. Media reports that day noted that PHUN's share price declined alongside the share price of Digital World Acquisition Company (DWAC), a special purpose acquisition company (SPAC) linked to Donald J. Trump, as Plaintiff's technology had been utilized by the Donald J. Trump 2020 presidential campaign. Notwithstanding media reports suggesting that the price changes on October 26, 2021, were explained by anti-Trump sentiment, the decline in PHUN's share price caused by Defendant's spoofing was in fact not explained by common anti-Trump sentiment driving changes in the price of DWAC and PHUN shares. From 9:28am to 9:33am—the period during which Defendant's spoofing activity drove down the price of PHUN to a low of a decline of 11% over that period, the price of DWAC generally *increased*, at one point reaching a peak *increase* of 4% over that same period relative to its level at 9:28am. Plaintiff's sales at 9:33am thus could not be explained by common sentiment driving the price of DWAC and PHUN shares. And while the price of DWAC did subsequently decline over the following hour, by 10:07:27.655291am—when Plaintiff had sold a total of ***3,665,871*** shares—the decline in PHUN's share price was nearly ***twice as large*** as the decline in DWAC (-34% vs. -18%). The decline in DWAC's share price thus did not explain the entire decline in PHUN's share price.

149. The decline in PHUN's share price on October 26, 2021, was also not caused by the sale of shares by Plaintiff. If Plaintiff were driving down the price of PHUN shares by selling those shares, successive sales would occur at declining prices. However, that day, ***over 90%*** of sales by the Plaintiff were made ***at the same or higher price*** as the preceding sale.

3. February 12, 2021

150. On February 3, 2021, Phunware filed a Registration Statement on Form S-3 (Registration No. 333-252694) with the SEC, pursuant to Rule 415 promulgated under the Securities Act of 1933, to register, among other things, the offering and sale of up to $100,000,000 in share of Phunware's common stock, par value $0.0001 per share. On February 7, 2021, Phunware announced that it was launching a proposed public offering of securities and that the price for the offering would be "subject to market and other conditions."[34]

151. On February 11, 2021, Phunware's Board voted to approve a public offering and sale of shares of Phunware common stock with an aggregate market value of up to $25,000,000 out of the securities registered pursuant to the Registration Statement at such price and under such terms as may be approved by a Pricing Committee of Phunware's Board (the "Offering").

152. That same day, Phunware's Board established a duly formed Pricing Committee for the Offering. Among other things, the Pricing Committee was established to "determine the price or prices at which such shares of Common Stock are to be sold in the Offering," and the "terms and conditions of connection with the Offering."

153. At 14:34:57 on February 11, 2021, Phunware filed a request that its Registration Statement be "declared effective at 3:00 p.m. Eastern Time on February 11, 2021, or as soon thereafter as is practicable."[35]

154. Seeing an opportunity to enrich itself at Phunware's expense due to the Offering, Defendant thereafter engaged in spoofing activity that affected the closing price of PHUN shares

[34] https://finance.yahoo.com/news/phunware-launches-proposed-public-offering-121200311.html

[35] https://www.sec.gov/Archives/edgar/data/1665300/000162828021001931/0001628280-21-001931-index.htm

on February 11, 2021, and thus affected the price at which PHUN sold shares in the Offering.[36] During just the final ten minutes of that trading day, Defendant placed attributed Baiting Orders to sell 107,712 shares —over $1.6 million in value—at a wide range of prices. By comparison, during the entire rest of the trading day, Defendant created attributed sell-side orders for only 2,800 shares. That is, over a period lasting less than ten minutes at the end of the trading day, Defendant placed more than 38 times the volume of attributed sell-side orders that it had placed throughout the entire rest of that trading day. These Baiting Orders created an imbalanced order book position among attributed orders favoring the sell side, with the share volume of newly created sell-side order volume exceeding the share volume of newly created buy-side order volume during this period by 73%. During this period, Defendant did not sell any shares of PHUN in attributed orders, consistent with the fictitious nature of the Baiting Orders.

155. The Baiting Orders successfully induced the entry of sell orders from other market participants, driving the price of PHUN shares downward by 1.7% over this ten-minute period, from a high of $2.87 to a low of $2.82 over this period. During this period, Defendant took advantage of this artificial downward pressure and executed Executing Purchases to buy a total of 4,014 shares, in three transactions of 3,414, 100 and 500 shares at 15:51:47.713, 15:56:17.667 and 15:56:20.163, respectively, at prices between $2.84 and $2.85 per share. The asymmetric

[36] This spoofing activity is not included in Exhibit 1. The methodology used to identify this spoofing activity is consistent with the methodology utilized by the government and accepted by courts to analyze loss causation in spoofing cases. *See, e.g.*, Declaration of Kumar Venkataraman, *U.S. v. Smith*, No. 19-CR-000669 (E.D. Ill., Dec. 22, 2022) (enclosed as Exhibit 4) ("while the conduct described by the DOJ's witnesses at trial was focused on instances where the spoof orders directly benefited the Defendants by successfully triggering executions on their smaller orders, the Spoofing Sequences here also include spoof orders that caused harm to the rest of the market even though they did not directly benefit the Defendants' smaller orders."); Order, *U.S. v. Smith*, 19-CR-000669, ECF No. # 909 (E.D. Ill., Aug. 21, 2023) (enclosed as Exhibit 5) ("The Spoofing Sequences need not fit exactly the trial-evidence sequences; instead, the key features should (and do) remain intact.").

downward pressure created by these Baiting Orders far exceeded the upward pressure arising from Defendant UBS's buy-side orders and Executing Purchases.

156. Trading in PHUN shares closed at 4:00pm, the time when a closing price would be determined and Phunware's Offering would be priced. Within milliseconds after the 4pm close of trading on February 11, 2021, Defendant began to cancel the artificial supply injected by these Baiting Orders. In just three minutes, from 16:00:00.397 to 16:00:03.277, Defendant cancelled all 107,712 shares in sell-side Baiting Orders that had been previously injected into the market (as well as 59,340 shares in buy-side orders), eliminating the artificial sell-side imbalance that had been falsely conveyed and injected into the market. As a result of Defendant's spoofing activity, Phunware's stock price fell from a closing price of $3.04 on February 10, 2021, to $2.81 on February 11, 2021, or more than 7.5%. Following the close of the market on February 11, 2021, Defendant's spoofing continued to cause Phunware's stock price to fall. While the price attempted to rebound, it ultimately reached a low of $2.41 at 6:13:25am on February 12, 2021.

157. On February 11, 2021, following the close of the market, the Pricing Committee and then the Board priced the offering at $2.25 per share. The $2.25 price per share for the Offering reflected a 20% discount to the closing share price of Phunware on February 11, 2021, a fact noted by news reports issued on February 12, 2021, and was selected based on the price of Phunware's shares following the close of the market on February 11, 2021.

158. On February 12, 2021, at 6:00am Phunware issued a press release announcing that it would be commencing the Offering previously announced.

159. One hour later, at 7:00am, Phunware issued a press release announcing that the Offering would be priced at $2.25 per share. That press release noted that the gross proceeds to the Company from the Offering, before deducting underwriting discounts and offering expenses

payable by the Company, were expected to be approximately $25 million.

160. Plaintiff sold 11.7 million shares of PHUN stock in the Offering on February 12, 2021 at prices negatively impacted by Defendant's spoofing in the final minutes of the market open on February 11, 2021.

161. If Defendant had not spoofed Phunware's stock from 3:50pm to 4:00pm on February 11, 2021, the 4pm closing price of Phunware's shares would have been higher on February 11, 2021. If Phunware's 4pm closing price was higher on February 11, 2021, the price for the Offering would have been higher than $2.25 per share, and Phunware would have received more than $25 million in gross proceeds from the Offering.

162. The decline in Phunware's stock price on February 11, 2021 used to price the Offering, cannot be explained by other company-specific facts, circumstances or events. A search of news databases and SEC filings on Factiva shows that there was no corporate news or disclosures which could explain the price decline on that date. There was no new public information about Phunware in the market disclosed on that date.

* * *

~~122.~~163. For all these reasons, while each Spoofing Episode had a small negative impact on the price of PHUN shares, the placement and cancellation of Baiting Orders throughout the Relevant Period had the cumulative effect of driving PHUN's share price down during the Relevant Period.

~~123.~~164. Defendant's wrongful conduct proximately caused Plaintiff's losses that Plaintiff suffered when the market price of PHUN shares was being driven downward.

VI. THE MARKET FOR PHUN WAS EFFICIENT DURING THE RELEVANT PERIOD

~~124.~~165. During the Relevant Period, the market for PHUN was an efficient market

for the following reasons, among others:

a. As a regulated issuer, PHUN filed periodic public reports with the SEC;

b. PHUN shares traded on Nasdaq;

c. PHUN shares traded at high weekly trading volumes;

d. PHUN filed registration statements with the SEC on Form S-3;

e. The market reacted promptly to public information disseminated by PHUN;

f. PHUN regularly communicated with public investors via established market communication mechanisms, including regular disseminations of press releases on the national circuits of major newswire services and other public disclosures, such as communications with the financial press and other similar reporting services; and

g. PHUN was regularly covered throughout the Relevant Period by financial analysts, including HC Wainwright, Roth Capital, Taglich Brothers and Ascendiant, as well as in the financial news.

~~125.~~166. As a result of the foregoing, the market for PHUN's shares promptly digested current information regarding PHUN from all publicly available sources and reflected such information in the price of PHUN's shares.

VII. CLAIMS FOR RELIEF

A. First Claim for Relief for Spoofing in Violation of Section 10(b) of the Exchange Act of 1934 and Rule 10b-5(a) and (c) Promulgated Thereunder

~~126.~~167. Plaintiff incorporates by reference paragraphs 1 through ~~125~~166 as if more fully set forth herein.

~~127.~~168. During the Relevant Period, Defendant engaged in and employed devices, schemes, illegal acts, practices, and courses of conduct, that were intended to manipulate the

market price of PHUN shares that were listed and traded on Nasdaq, and which operated as a fraud and deceit upon Plaintiff.

~~128.~~169. As a direct and proximate result of Defendant's wrongful conduct, Plaintiff suffered damages in that it sold PHUN shares at manipulative prices, in reliance on an assumption of an efficient market free of manipulation. Plaintiff would not have sold shares at the prices sold if it had been aware of Defendant's manipulative and otherwise wrongful conduct that artificially and negatively affected the prices of PHUN shares.

B. Second Claim for Relief for Spoofing in Violation of Section 9(a)(2) of The Securities Exchange Act of 1934

~~129.~~170. Plaintiff incorporates by reference paragraphs 1 through ~~125~~166 as if more fully set forth herein.

~~130.~~171. Based upon the conduct described above, Defendant's manipulative scheme violated Section 9(a)(2) of the Securities Exchange Act of 1934, which makes it unlawful to engage in a series of manipulative transactions "in any security . . . creating actual or apparent active trading in such security, or raising or depressing the price of such security, for the purpose of inducing the purchase or sale of such security by others."

~~131.~~172. By reason of the conduct described above, Defendant directly used the mails, or instrumentalities of interstate commerce, or a facility of a national securities exchange, to effect alone or with one or more other persons, a series of transactions in PHUN shares that created actual or apparent trading in such securities or raising or depressing the price of such securities for the purpose of inducing the purchase or sale of such securities by others, engaged in the market manipulation strategy of spoofing which artificially affected the prices of PHUN shares that Plaintiff sold.

~~132.~~173. Defendant's conscious misbehavior or recklessness artificially affected the

price of PHUN shares that Plaintiff sold during the Relevant Period. Plaintiff's financial injuries would not have been as extensive but for the Defendant's conscious misbehavior or recklessness.

C. Third Claim for Relief for New York Common Law Fraud

~~133.~~174. Plaintiff incorporates by reference paragraphs 1 through ~~125~~166 as if more fully set forth herein.

~~134.~~175. By placing and then cancelling Baiting Orders in its abusive spoofing scheme, Defendant knowingly or recklessly injected into the market false and misleading information concerning the fake supply of PHUN shares that appeared available for trading. This interfered with the natural market forces of supply and demand and artificially drove the price of the shares downward. When Plaintiff sold its PHUN shares during the Relevant Period, it suffered damages that were directly and proximately caused by Defendant's fraud.

~~135.~~176. When Plaintiff sold its PHUN shares during the Relevant Period, it did not possess any specific facts demonstrating that the market price of PHUN stock was being manipulated and therefore, it relied on the efficiency of the market that had been unlawfully manipulated it suffered damages that were directly and proximately caused by Defendant's fraud. As a result, Plaintiff suffered financial losses that were directly and proximately caused by the Defendant's fraud.

D. Fourth Claim for Injunctive Relief

~~136.~~177. Plaintiff incorporates by reference paragraphs 1 through ~~125~~166 as if more fully set forth herein.

~~137.~~178. Plaintiff seeks to permanently enjoin Defendant from engaging in spoofing conduct that affects the PHUN share price. Defendant's actions identified herein have caused, continue to cause, and will cause future permanent and irreparable harm to Plaintiff.

~~138.~~179. The balance of the equities favors an injunction to prevent Defendant from continuing to spoof PHUN stock. The harm to Plaintiff is significant. In contrast, the potential harm to Defendant of an injunction is insignificant; Defendant would merely be required to halt its illegal activity. Thus, the public interest is best served by enjoining Defendant's spoofing behavior.

~~139.~~180. As noted throughout this Complaint, it is extremely likely that Plaintiff will succeed on the merits in this case. All evidence to be presented, including trading records and Defendant's own trading algorithms, will support the position that Defendant was manipulating the PHUN share price through spoofing.

~~140.~~181. As such, this Court should enter a permanent injunction enjoining Defendant from engaging in spoofing activities and any other illegal manipulative conduct that affects the PHUN share price.

VIII. PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court enter a judgment:

A. Finding that Defendant violated the federal securities and New York state laws as alleged in this Complaint;

B. Ordering Defendant to pay damages as a result of its unlawful conduct in an amount to be determined at trial;

C. Ordering permanent injunctive relief as described herein;

D. Awarding reasonable attorneys' fees and costs together with all available pre and post judgment interest; and

E. Granting such other and further relief as the Court deems just and appropriate.

IX. DEMAND FOR JURY TRIAL

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, the Plaintiff demands trial by jury in this action of all issues so triable.

Dated: ~~July 25, 2023~~April 17, 2024
New York, New York

Respectfully submitted,

By: *Laura H. Posner*

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